THE LAST DEPARTMENTAL EXAMS

GIFT OF CORBIN BROWN

Note.

The 1967 Grade 12 papers may be found in Cases 23 a-b - of the Registrar's Library, transferred from the Ministry to the Ontario History of Education Collection at OISE in 1976.

EXAM. FORM 70
82.000-67

ONTARIO

DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS - 1967

TIME-TABLE

Date	Hour of Examination		GRADE 13
Monday	a.m.	9.00–12.00	English ✓
5th June	p.m.	1.30– 3.30	Secretarial Practice ✓ [illegible]
Tuesday	a.m.	9.00–11.00	Biology ✓ [illegible]
6th June	p.m.	1.30– 3.30	Art ✓
Wednesday	a.m.	9.00–12.00	Introduction to Analysis (Mathematics A) ✓
7th June	p.m.	1.30– 3.30	Accountancy Practice ✓
Thursday	a.m.	9.00–11.00	Geography ✓ [illegible]
8th June	p.m.	1.30– 3.30	Physics ✓ [illegible]
Friday	a.m.	9.00–12.00	French ✓ [illegible]
9th June	p.m.	1.30– 3.30	Mathematics of Investment ✓
Monday	a.m.	9.00–12.00	Algebra (Mathematics B) ✓
12th June	p.m.	1.30– 3.30	Music ✓
Tuesday	a.m.	9.00–11.00	History ✓ in French
13th June	p.m.	1.30– 3.30	Chemistry ✓ [illegible]
Wednesday			No examinations
14th June			No examinations
Thursday			No examinations
15th June			No examinations
Friday	a.m.	9.00–12.00	Latin ✓
16th June	p.m.	1.30– 4.30	Problems ✓
Monday	a.m.	9.00–12.00	Français ✓
19th June	p.m.	1.30– 4.30	Greek ✓
Tuesday	a.m.	9.00–12.00	German ✓
20th June	p.m.	1.30– 3.30	Algebra (old) ✓
Wednesday	a.m.	9.00–12.00	Spanish ✓
21st June	p.m.	1.30– 3.30	Geometry ✓ [illegible]
Thursday	a.m.	9.00–12.00	Russian ✓
22nd June	p.m.	1.30– 3.30	Trigonometry and Statics ✓ [illegible]
Friday	a.m.	9.00–12.00	Italian ✓
23rd June			

IMPORTANT NOTICE TO CANDIDATES

Some recent changes in the conduct of the Grade 13 Departmental examinations are set out below.

PLEASE READ THEM CAREFULLY

(1) A candidate who makes application after April 6 shall be required to pay a late-entry fee of $5.00.

(2) The Regulation governing the Grade 13 examinations of 1967 makes provision for 35% of the final standing in a Grade 13 paper to be based on a mark which, in the opinion of the principal and the teacher, represents the candidate's proficiency in the subject as indicated by his work during the year. This Regulation makes it absolutely imperative that candidates indicate to the Department at the time of application for the examinations the method by which they were prepared for each paper they expect to write. The Department must accept this information as correct and use it immediately in one of its electronic data processing procedures leading to an early release of the results. If it is found to be incorrect or misleading on a final check at a later date, the candidate's statement of marks will be delayed at the Department or recalled for an adjustment in the final standing.

(3) A candidate may provide himself with a slide-rule containing only the original markings of the manufacturer for the examinations in Mathematics and Science. The principal or presiding officer will not be required to provide slide-rules for the examinations.

(4) The final date for making appeals for the re-reading of Grade 13 answer papers is September 1. Only a paper to which a mark of less than 50 has been assigned may be appealed.

General information and instructions regarding the Grade 13 examinations will be found on the back of this time-table. Candidates who are privately prepared in one or more papers are asked to refer to the back of the Candidate's Statement.

NOTE.—Français (June 19) of the Grade 13 examinations is provided for French-speaking pupils who, as candidates for admission to the University of Ottawa Teachers' College or Sudbury Teachers' College, are required to take this subject. (See Circular 611(a).) Candidates may use the standing obtained in Français in lieu of the standing obtained in English for the Secondary School Honour Graduation Diploma. Standing obtained in both French and Français will not be credited for this purpose.

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

ENGLISH

3 HOURS

NOTE 1. *Specific marks for organization and style will be given for the answers chosen from Parts C and D. However, orderly presentation of material and good English are expected throughout the paper. Candidates who neglect these essentials will be penalized.*

NOTE 2. *Write on alternate lines throughout the paper.*

PART A

(*approximately 55 minutes*)

Answer any *THREE* questions from Part A.

1. C. P. Snow begins his essay *Man in Society* with the words "Hiroshima and Auschwitz." State *four* arguments, with one illustration from the essay for each argument, that Snow advances to counteract the pessimism suggested by these names.

2. In H. G. Wells' short story *The Door in the Wall* the narrator remarks: "He was mystifying . . . How well he did it!"

(*a*) State *three* different methods by which a sense of mystery is created, and illustrate each method by reference to the story.

(*b*) State *three* different methods by which the story is made credible to the reader, and illustrate each method by reference to the story.

3. Compare and contrast Thomas' imagery in *Fern Hill* with that of Shelley in *Ode to a Skylark*. The passages quoted below provide a basis for the discussion, but candidates must refer also to other parts of these two poems.

> And nothing I cared, at my sky blue trades, that time allows
> In all his tuneful turning so few and such morning songs
> Before the children green and golden
> Follow him out of grace...
> —from *Fern Hill* by Thomas.

> Sound of vernal showers
> On the twinkling grass,
> Rain-awakened flowers,
> All that ever was
> Joyous, and clear, and fresh, thy music doth surpass.
> —from *Ode to a Skylark* by Shelley.

CONTINUED OVER

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Approximate Percentage Values

4. (*a*) What impression of Prufrock's charact[illegible]s created [illegible] Eliot's poem *The Love Song of J. Alfred Prufroc*[illegible]?

(*b*) What contributions do the imagery and the literary allusions in the poem make to this impression of Prufrock?

5. Wordsworth in *There Was a Boy* and Klein in *Autobiographical* present a picture of childhood. Compare and contrast the presentation of childhood in these two poems.

PART B

(*approximately 30 minutes*)

6. Read the following passage and answer the questions based on it.

> Standing on our microscopic fragment of a grain of sand, we attempt to discover the nature and purpose of the universe which surrounds our home in space and time. Our first impression is something akin to terror. We find the universe terrifying because of its vast meaningless distances, terrifying because of its inconceivably long vistas of time which dwarf human history to the twinkling of an eye, terrifying because of our extreme loneliness, and because of the material insignificance of our home in space — a millionth part of a grain of sand out of all the seasand in the world. But above all else, we find the universe terrifying because it appears to be indifferent to life like our own; emotion, ambition and achievement, art and religion all seem equally foreign to its plan. Perhaps indeed we ought to say it appears to be actively hostile to life like our own. For the most part, empty space is so cold that all life in it would be frozen; most of the matter in space is so hot as to make life on it impossible; space is traversed, and astronomical bodies continually bombarded, by radiation of a variety of kinds, much of which is probably inimical to, or even destructive of, life.

(211 words) —from *The Mysterious Universe* by Sir James Jeans.

8 (*a*) In a coherent paragraph of not more than 90 words, summarize the above passage.

2 (*b*) Comment briefly on *one* metaphor in the above passage.

3 (*c*) State, with examples from the above passage, *three* ways in which the author makes his prose effective.

Approximate Percentage Values

PART C

(*approximately 45 minutes*)

NOTE 1. *Specific marks for organization and style wil for the answer from Part C.*

NOTE 2. *Candidates are warned that a mere plot sum not constitute an answer to Part C.*

Answer *ONE* of (*a*), (*b*), (*c*) from Part C.

Matter 1×15

Style 1×10

7. (*a*) Write an essay on the father-son relationship making reference to *each* of the following pairs: Hamle Hamlet; Polonius—Laertes; Fortinbras Senior—Fortin

or

(*b*) Write an essay on revenge in *Hamlet*. Incluc answer references to Hamlet, Laertes, and Fortinbras

or

(*c*) Write an essay on the atmosphere of corruptio *let*, demonstrating that characters and imagery contribu atmosphere.

PART D

(*approximately 25 minutes*)

Specific marks for organization and style will be the answer from part D.

Answer *ONE* of (*a*), (*b*), (*c*), (*d*), (*e*) from Par

Matter 1×8

Style 1×5

8. (*a*) Conrad in his novel *Heart of Darkness* uses nique of symbolism. With reference to *four* specific p the novel, show that Conrad uses the symbol of darkne effect.

or

(*b*) In Conrad's novel *Heart of Darkness* Marlow both as the narrator and as an actor in the story that he What purposes are served in the novel by the use of this

or

(*c*) Outline the arguments used by Warwick and C Shaw's play *Saint Joan* to justify the execution of Joa

or

(*d*) In any great tragedy the hero or heroine face ternal and internal conflicts. What external and inter does Joan have to contend with in Shaw's play *Saint J*

or

(*e*) The Epilogue in Shaw's play *Saint Joan* has cized on the grounds that it detracts from the tragic the drama. Attack *or* defend Shaw's insistence in the the play that "the epilogue must stand."

→CONTINUED

PART E

(approximately 25 minutes)

9. Read the following poem and answer the questions below it.

THE JOURNEY

Upon what confident iron rails
    We seemed to move to the clear view
At the end of the line, where, without fail,
    My visions would come true.

There, where the sun melts the curved hills
    In one transparent wave against the skies,
I'd see your tender smile, more than your will,
    Shine through the coldness of your eyes.

Our harsh tongues of today would run in tears
    Back to this buried Now become the past.
In the cool shadows we'd unclasp our fears
    Transformed to love at last.

Oh, but then suddenly the line
    Swung onto another view
Barren with myself, and the blank pain
    Of the crammed world without you.

—Stephen Spender.

Approxi
Percent
Value

(*a*) What evidence do you find in this poem to support the iew that the poet is speaking of a lovers' quarrel?

(*b*) Explain the metaphor in the first three lines of stanza ne and the first line of stanza four.

(*c*) Select and identify a figure of speech in line 9.

3×1

««« THE END »»»

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ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

HISTORY

2 HOURS

NOTE 1. *THREE questions constitute a full paper. Candidates are to answer ONE question from EACH of Sections A, B, and C.*

NOTE 2. *Specific marks for the organization and presentation of factual material will be given for EACH of the answers in Sections A and B. The answer in Section C will be marked on a subjective basis.*

NOTE 3. *All questions are equal in value.*

Section A

Answer ONE question from Section A.

1. What economic, social, and political developments after 1841 made the Act of Union a temporary solution for the problems of government in Canada East (Lower Canada) and Canada West (Upper Canada)? In your answer show that Union was always difficult and indicate why, by 1864, it could no longer provide effective government.

2. "Canadian Confederation came first and foremost from the need for defence; this need alone from 1861 to 1867 brought essentially different regions into a federal system." Describe the steps which led to Confederation, and assess the accuracy of the quotation.

3. In 1896, when Laurier became Prime Minister, Canada was a nation; yet in some ways it was still a colony. Explain this statement; describe Canada's advances towards nationhood by 1939, and state whether or not Canada was fully a nation by 1939.

Section B

Answer ONE question from Section B.

4. From the War of 1812 to the defeat of Mexico in 1848, the United States became a stronger federal state in spite of the growth of sectional and class differences. Describe the ways in which expansion, nationalism, and democracy developed together, during this period, without resolving sectional and class differences.

CONTINUED OVER→

5. The period from 1865 to 1900 in the United States is often called the "gilded age". What is the significance of this term? Why and how did reformers react against the excesses of this period?

6. Theodore Roosevelt was successful both as an imperialist and as a progressive. Describe these two aspects of Theodore Roosevelt with examples from his political career. Suggest how he was able to be an imperialist and a progressive at the same time.

Section C

Answer ONE question from Section C.
(*to be marked on a subjective basis*)

7. "The contrast between Hamilton and Jefferson was fundamental. It can best be explained when the Constitution of 1787 is seen as a compromise which reflected but did not resolve basic differences in American society." Discuss this statement for the period from 1787 to 1800.

8. "The leadership of Sir John A. Macdonald from 1867 to 1891 resulted mainly from three factors — his skill as a party politician, his vision of Canada as a nation, and his acceptance of the role of big business in federal politics." How would you assess these three factors in explaining Macdonald's career as Prime Minister of Canada?

««« THE END »»»

1867 1967

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

HISTOIRE

2 HEURES

Note 1. TROIS *questions constituent un examen complet. Les candidats ne répondront qu'à UNE question de CHACUNE des sections A, B et C.*

Note 2. *On accordera des points pour l'organisation et la présentation de la matière à CHAQUE réponse des sections A et B. On évaluera sur une base subjective la réponse à la section C.*

Note 3. *Toutes les questions comportent le même nombre de points.*

Section A

Ne répondez qu'à UNE question de la section A.

1. Quels développements économiques, sociaux et politiques après 1841 ne firent de l'Acte d'union qu'une solution temporaire aux problèmes du gouvernement de l'est du Canada (Bas-Canada) et de l'ouest du Canada (Haut-Canada) ? Montrez que l'Union était toujours difficile et indiquez pourquoi, vers 1864, elle ne pouvait plus assurer un gouvernement efficace.

2. "La Confédération canadienne résulta d'abord et surtout d'un besoin de défense; de 1861 à 1867, seul ce besoin groupa sous un système fédéral des régions essentiellement différentes." Décrivez les étapes qui conduisirent à la Confédération et établissez la valeur de cette citation.

3. En 1896, alors que Laurier devint Premier Ministre, le Canada était une nation; pourtant, à certains points de vue, il n'était encore qu'une colonie. Expliquez cette affirmation; décrivez les progrès réalisés par le Canada jusqu'en 1939 dans son évolution vers l'état de nation; dites si oui ou non le Canada était vraiment une nation en 1939.

—TOURNEZ→

Section B

Ne répondez qu'à UNE question de la section B.

4. Depuis la Guerre de 1812 jusqu'à la défaite de Mexico en 1848, les Etats-Unis devinrent un état fédéral plus fort en dépit du développement de différences de groupes et de classes. Décrivez comment l'expansion, le nationalisme et la démocratie se sont accrus au cours de cette période, sans régler les différences de groupes et de classes.

5. La période de 1865 à 1900 aux Etats-Unis a souvent été appelée l'"âge doré". Quelle est la signification de cette expression? Pourquoi et comment les réformateurs ont-ils réagi contre les excès de cette période?

6. Théodore Roosevelt a eu du succès comme un homme imperialiste et progressif. En vous servant d'exemples tirés de sa carrière politique, décrivez ces deux aspects de Théodore Roosevelt. Faites voir comment il a pu être impérialiste et progressif à la fois.

Section C

Ne répondez qu'à UNE question de la section C.
(*points accordés sur une base subjective*)

7. "Le contraste entre Hamilton et Jefferson était fondamental. Il peut s'expliquer plus facilement si l'on envisage la Constitution de 1787 comme un compromis qui reflétait sans les résoudre les différences de base dans la société américaine." Commentez cette affirmation pour ce qui est de la période de 1787 à 1800.

8. "L'habileté de Sir John A. Macdonald à diriger de 1867 à 1891 fut le résultat de trois facteurs—son savoir-faire en tant que membre d'un parti politique, sa vision du Canada en tant que nation et son acceptation du rôle des grandes entreprises financières dans les questions de politique fédérale." Comment évalueriez-vous ces trois facteurs dans l'explication de la carrière de Macdonald comme Premier Ministre du Canada?

«« FIN »»

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

INTRODUCTION TO ANALYSIS
(MATHEMATICS A)

3 HOURS

NOTE. *Mathematical tables and graph paper are not required, and are not to be supplied to the candidates.*

Section A

NOTE. *The Presiding Officer will provide an Answer Sheet for Section A on which you will record* **only the answers.** *Calculations for Section A may be made on left-hand (unlined) pages of your examination book.*

Approximate Percentage Values

1. Given $f(x)=\dfrac{\sqrt{x+2}}{x-2}$, state the values of x for which $f(x)$ is real.

2. Given that inverse functions are defined by $y=\dfrac{1}{x+1}$ and $y=f(x)$, find $f(x)$.

3. Evaluate $\cos 15^\circ - \sin 75^\circ$.

15×2 4. Let ϕ be the acute angle between $2x-y+6=0$ and $3x+5y-7=0$; find $\tan\phi$.

5. Find $\dfrac{dy}{dx}$, given that $y=\dfrac{1}{3x}$.

6. Find $\dfrac{dy}{dx}$, given that $y=\sqrt{2x}$.

7. Find $f'(x)$, given that $f(x)=\dfrac{1}{\sqrt{2x}}$.

8. Find D_xy, given that $y=x^4-8x^3+7x-2$.

CONTINUED OVER→

Approximate Percentage Values

9. Find $f'(t)$, given that $f(t) = -\sqrt[3]{5t}$.

10. Find $f'(x)$, given that $f(x) = \dfrac{2-3x}{5x-2}$.

11. Find $D_x y$, given that $y = \sqrt{1-4x^3}$.

12. Given that $3 \sin \theta + 4 \cos \theta = A \sin(\theta + \phi)$, evaluate $A \tan \phi$.

13. Express $\sin^2 \theta$ in the form

$$A + B \cos \theta + C \cos 2\theta,$$

where A, B, C, are real numbers.

14. The curve $y = 3x^4 + 4x^3 - 72x^2 + 10$ has two minima. Find the abscissae of the two minimum points.

15. Find $\dfrac{dy}{dx}$, given that $x^3 - 3xy + y^3 = 3$.

Section B

NOTE. *In Section B, write both your* **solutions** *and your* **answers** *on the* ***right-hand (lined)*** *pages of the examination book.*

11 16. The tangent at $A(2, 8)$ to the curve $y = x^3$ meets the curve again at a point C, and the y-axis at a point B. Show that B divides the line segment AC in the ratio 1:2.

9 17. Find the maximum and minimum values of the real function defined by

$$y = \frac{x^2 - x + 2}{x^2 + 2x + 5}.$$

(It is not necessary to indicate which value is the minimum and which is the maximum.)

5 18. (*a*) Evaluate the expression

$$\frac{\cos\left(A - \frac{\pi}{6}\right) + \cos\left(A + \frac{\pi}{6}\right)}{\sin\left(\frac{\pi}{2} - A\right)}.$$

6 (*b*) Prove the identity $\dfrac{1 - \cos 2\theta}{1 + \cos 2\theta} = \sec^2 \theta - 1$.

Approximate Percentage Values

2 19. (*a*) A translation of the plane maps the point (h, k) onto the point $(0, 0)$, and the point (x, y) onto the point (X, Y). State the relations among x, y, X, Y.

10 (*b*) (i) Find the translation that will eliminate the first-degree terms from the equation of the conic

$$3x^2 + 2y^2 - 6x + 12y + 4 = 0.$$

(ii) Find the distance between the foci of the conic in (i).

9 20. Given the equation $ax^2 + 2hxy + by^2 + c = 0$, determine θ so that the coefficient of the XY term is zero after performing the rotation $(x, y) \rightarrow (X, Y)$, where

$$X = x \cos \theta - y \sin \theta,$$
$$Y = x \sin \theta + y \cos \theta.$$

10 21. In the operation of a ship, fixed operating costs amount to \$135 per hour, and the cost per hour of fuel is proportional to the cube of the speed. Given that the cost per hour of fuel is \$20 when the speed is 10 miles per hour,

(*a*) express the cost per mile as a function of speed,

(*b*) find the speed that makes this cost per mile a minimum.

8 Answer *either* Question 22 *or* Question 23.

either

22. The sum of the first n terms of the geometric series

$$u + ux + ux^2 + ux^3 + \cdots$$

is given by

$$S_n = \frac{u - ux^n}{1 - x}, \quad (x \neq 1).$$

Discuss the behaviour of S_n, as n becomes arbitrarily great, for $x < 1$.

or

23. $y = mx + b$ and $x^2 - xy - 2y^2 + 3x - 4y + 10 = 0$ are the equations of a line and an hyperbola, respectively. Depending on the values of the real numbers m and b, the above pair of equations may have

(i) real solutions,
(ii) non-real solutions,
(iii) no solution.

(*a*) State the geometrical interpretation for *each* of the cases (i), (ii), and (iii).

(*b*) Find the values of m and b which produce case (iii).

««« THE END »»»

INTRODUCTION TO ANALYSIS
(MATHEMATICS A)

1967

ANSWER SHEET FOR SECTION A

You *must* record your answers to Section A on this Answer Sheet.

NOTE. *At the close of the examination the Answer Sheet is to be placed on top of your examination book and inserted in the envelope.*

1. The values for x are

....

2. $f(x) =$ ....

3. $\cos 15° - \sin 75° =$ ....

4. $\tan \phi =$ ....

5. $\frac{dy}{dx} =$ ....

6. $\frac{dy}{dx} =$ ....

7. $f'(x) =$ ....

8. $D_x y =$ ....

9. $f'(t) =$ ....

10. $f'(x) =$ ....

11. $D_x y =$ ....

12. $A \tan \phi =$ ....

13. $\sin^2 \theta =$ ....

14. The abscissae of the two minimum points are ....

15. $\frac{dy}{dx} =$ ....

1867 1967

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

ALGEBRA

(MATHEMATICS B)

3 HOURS

NOTE. *Mathematical tables and graph paper are not required, and are not to be supplied to the candidates.*

SECTION A

Answer any EIGHT of the nine questions in Section A.

(*Each question has a percentage value of 9. If more than eight questions are attempted, indicate clearly which eight questions are to be marked.*)

1. (*a*) (i) Use Venn diagrams to illustrate that the statement $A \cup (B \cap C) = (A \cup B) \cap C$ is not always true.

(ii) Write a statement involving $A \cup (B \cap C)$ which is always true.

(*b*) State whether each of the following statements is sometimes true, always true, or never true. (A' is the complement of A.)

(i) If $k \in A$, then $k \in (A \cap B)$.

(ii) If $k \in (A \cap B)$, then $k \in (A' \cup B')$.

(iii) If $A \cap B = \phi$, then $(A \cap C) \cup (B \cap C) = \phi$.

(*c*) If $n(A)$ represents the number of elements in set A, and if $n(A) = 12$, $n(B) = 8$, $n(A' \cap B) = 6$, find $n(A \cap B')$.

2. (*a*) By first obtaining the row-reduced echelon form of the augmented matrix, solve the system

$$\begin{aligned} x - y + 2z &= -3 \\ 2x + y + 3z &= 1 \\ 3x + 3y - z &= 10 \end{aligned}$$

(*b*) In a certain system of three linear equations, the third row of the row-reduced echelon form of the augmented matrix is

$$0,\ 0,\ a-7,\ b-5.$$

State, without proof, the number of possible solutions if

(i) $a = 7$, $b = 5$,

(ii) $a = 7$, $b = 6$.

CONTINUED OVER

3. (*a*) Evaluate $f(2, 1)$ where $f(n, r) = \binom{n}{r} + \frac{(n+1)!}{(n-r-1)!}$.

(*b*) A man wishes to invite some of ten people to a dinner party. How many different dinner parties can be formed if he plans to invite at least two of these people, but not all ten.

4. In the binomial expansion of

$$\left(2a^3 - \frac{1}{4a^2}\right)^8, \text{ find}$$

(*a*) the $(r+1)$th term,
(*b*) which term of the expansion contains a^{14},
(*c*) the coefficient of the term containing a^{14}.

5. (*a*) Prove by mathematical induction that

$$\sum_{k=1}^{n} k(k+1) = \frac{n(n+1)(n+2)}{3}, \quad n \in N.$$

(*b*) Evaluate $(8)(9) + (9)(10) + \cdots + (98)(99)$.

6. (*a*) Express the vector $\mathbf{c} = (11, -2)$ as a linear combination of $\mathbf{a} = (1, -2)$ and $\mathbf{b} = (2, 1)$.

(*b*) Establish whether or not the vectors $(2, 1, 0)$, $(3, 1, 1)$, and $(1, 0, 2)$ are coplanar.

(*c*) A line in 3-space makes an angle of 60° with the x-axis, and an angle of 45° with the y-axis. Determine the acute angle which this line makes with the z-axis.

7. (*a*) Given the triangle $A(5, 7)$, $B(2, 3)$, $C(11, -1)$, find the dot product of the vectors $\overrightarrow{AB}$ and $\overrightarrow{AC}$ and use this product to find the cosine of $\angle BAC$.

(*b*) The vector $(a, b, -2b)$ is perpendicular to each of the vectors $(b, 2a, 3b)$ and $(a+1, a, 4b)$. Find a and b, given that $b \neq 0$.

8. In a parallelogram $ABCD$, H is the mid-point of AD, and E divides BC in the ratio 3:2. If BH and AE intersect at M, ***use vectors*** to find the ratio $AM:ME$.

9. (*a*) (i) Find the parametric equations of the line through the point $(1, -1, 0)$ and parallel to the vector $\mathbf{v} = (2, -1, 3)$.
   (ii) Find the co-ordinates of the point at which the line found in (i) intersects the plane $3x + 2y - z = 5$.

(*b*) (i) Find parametric equations of the plane which contains the points $A(3, 4, 1)$, $B(-2, 0, -1)$, and $C(-1, -2, 2)$.
   (ii) Find y_1 if the point $(0, y_1, 5)$ is also on this plane.

SECTION B

Answer any FOUR of the eight questions in Section B.

(*Each question has a percentage value of 7. If more than four questions are attempted, indicate clearly which four questions are to be marked.*)

10. Probability

Given the set $U=\{1, 2, 3, \cdots, 50, 51\}$, find the probability that

(*a*) a number chosen at random from U is either an even number or is the square of an integer,

(*b*) two numbers selected simultaneously from U will have an even number as their sum.

11. Probability

The probability that A will win a game is $\frac{1}{3}$.

(*a*) What is the probability that A will win every game of a five-game series?

(*b*) What is the probability that A will win exactly two games of a five-game series?

12. Matrices and Linear Transformations

Given the matrices $A=\begin{pmatrix} 2 & 3 \\ 1 & 4 \end{pmatrix}$, $B=\begin{pmatrix} 5 & 0 \\ -3 & 2 \end{pmatrix}$, and

$$C=\begin{pmatrix} 1 & 2 \\ 1 & -1 \end{pmatrix},$$

(*a*) find the products AB, BC, and AC,

(*b*) verify by computation that $(AB)C=A(BC)$ and name the general law illustrated by this example,

(*c*) using the matrices A and B, prove by computation that multiplication of matrices need not be commutative.

13. Matrices and Linear Transformations

(*a*) Find the inverse of the matrix $\begin{pmatrix} 2 & 3 \\ 4 & 5 \end{pmatrix}$.

(*b*) Give a geometrical interpretation of each of the following matrices.

(i) $\begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix}$, (ii) $\begin{pmatrix} -1 & 0 \\ 0 & -1 \end{pmatrix}$, (iii) $\begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}$.

14. Complex Numbers and Polar Co-ordinates

(*a*) If $z_1=-1+i\sqrt{3}$, $z_2=4i$, express z_1 and z_2 in polar form and illustrate each by a sketch (not on graph paper).

(*b*) Find the value of z_1z_2 in both rectangular and polar form.

(*c*) What is the relationship between the arguments of z_1 and z_2 and the argument of z_1z_2?

(*d*) If z is a complex number, describe geometrically the graph of $|z-1|=2$.

CONTINUED OVER→

15. Complex Numbers and Polar Co-ordinates

(*a*) Change the equation $r=\dfrac{5}{4\cos\theta+3\sin\theta}$ into Cartesian form, and identify the locus.

(*b*) Draw a sketch (not on graph paper) of the curve $r=1+\cos\theta$, showing the polar co-ordinates of any four points on the curve.

16. Groups

(*a*) State the conditions necessary for a set of elements to form a group with respect to a binary operation.

(*b*) $A=\{2, 4, 6, 8\}$. The expression $a*b$ means: multiply a by b in the ordinary manner, and then record only the last digit of the resulting product. For example, $6*8=8$, $2*6=2$, $4*2=8$.

(i) Construct a table for the operation $*$.
(ii) State the identity element of A.
(iii) List the inverse of each element of A.

17. Groups

(*a*) If your answer to any of the following questions is no, give one reason or one counter-example to justify your answer. If the answer is yes, no further comment is required.

(i) Do all the rational numbers form a group with respect to multiplication?
(ii) Do the even integers form a group with respect to addition?
(iii) Do the odd integers form a group with respect to addition?
(iv) If $a*b=a-b$, where a and b are integers, do the integers form a group with respect to this operation?

(*b*) Let $S=\left\{k, \dfrac{1}{k}, 1-k, \dfrac{1}{1-k}, \dfrac{k-1}{k}, \dfrac{k}{k-1}\right\}$, where k is a rational number ($k\neq 0$, $k\neq 1$).

For $a\in S$, $b\in S$, let $a*b$ denote the result of substituting the expression b in place of k in the expression a. Then $(S, *)$ is a group.

(i) Verify that $\dfrac{1}{1-k}$ and $\dfrac{k-1}{k}$ commute with respect to $*$.
(ii) Does it follow from (i) that the group $(S, *)$ is commutative? Give one reason or one counter-example to justify your answer.

«« THE END »»

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

ALGEBRA

2 HOURS

Approximate Percentage Values

NOTE. *You should obtain a book of mathematical tables from the Presiding Officer.*

7 1. Answer *either* (*a*) *or* (*b*).

either

(*a*) Develop the formula for the sum of the first k terms of the geometric series whose first term is a and whose common ratio is b $(b \neq 1)$.

or

(*b*) The roots of $ax^2+bx+c=0$ are real and unequal, and x_0 lies between these roots. Prove that $ax_0{}^2+bx_0+c$ is a negative number if $a > 0$.

9 2. (*a*) Develop the formula for the sum of the squares of the first n natural numbers.

3 (*b*) Find the value of $17^2+18^2+19^2+\cdots+51^2$.

9 3. $f(x)=ax^3-x^2+bx-2$ is exactly divisible by $2x+1$. When $f(x)$ is divided by $x-3$ there is a remainder of 28. Find a and b.

4. State the co-ordinates of the maximum or minimum point on the graph of each of the following functions. Without using graph paper, illustrate each answer by a sketch.

4 (*a*) $y=7-2x+2x^2$

5 (*b*) $y=-1-(x+2)^2$

CONTINUED OVER→

Approximate Percentage Values

3 5. (*a*) If $F(x)=\dfrac{|x-3|}{x-5}$, find, or explain why it is impossible to find, the numerical value of

(i) $F(2)$, (ii) $F(3)$, (iii) $F(5)$.

9 (*b*) $f(x)=\dfrac{x}{x+1}$; $g(x)=\dfrac{x+1}{x}$. Determine which of the following statements, if any, is true.

(i) $f(x)=g\left(\dfrac{1}{x}\right)$

(ii) $f[g(x)]\cdot g[f(x)]=1$

7 6. (*a*) Use the binomial theorem to obtain the first four terms, in ascending powers of x, of

$$\frac{1}{\left(1-\frac{x}{2}\right)^3}.$$

9 (*b*) In the binomial expansion of $\left(3x-\dfrac{1}{9\sqrt{x}}\right)^{\text{[illegible]}}$, find t_{r+1} in simplified form, and use it to obtain t_6.

4 7. (*a*) How many seven-digit numbers can be formed from the digits 1, 2, 2, 3, 3, 3, 4?

7 (*b*) How many seven-digit numbers can be formed from the digits 1, 2, 2, 3, 3, 3, 4, if a 3 may not be chosen as both the first and last digit?

12 8. (In this question, the rate of interest is 3% per annum, compounded annually, and all financial transactions take place on June 1st.)

A man deposits \$10.00 in the bank at intervals of two years, until five such deposits have been made. One year after he has made the fifth deposit, he starts depositing \$20.00 at intervals of three years, rather than two. Find, to the nearest ten cents, his accumulated savings just after he has made the fourth deposit of \$20.00.

12 9. If a, 6, c are the first three terms of a geometric progression, and a, 6, $\dfrac{3c}{4}$ are the first three terms of an arithmetic progression, find

(i) the possible values of a and c,

(ii) t_4 for all possible progressions.

««« THE END »»»

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

GEOMETRY

2 HOURS

Note. *Where applicable, do not change answers to decimal approximations.*

Approximate Percentage Values

The Presiding Officer will provide an Answer Folder on which you will record *only the answers.* At the close of the examination, the Answer Folder is to be placed on top of your examination book and inserted in the envelope.

Any necessary calculations are to be made in your examination book.

Record ONLY the Answers on the Answer Folder

10×3

1. Write the equation of the line through $(-2, 3)$ and $(4, -1)$.

2. Find the length of the perpendicular from $(-1, 2)$ to the line $5x-12y+3=0$.

3. Write the equation of the family of lines parallel to the line $3x-y-2=0$.

4. Find the angle between the lines $x-y+3=0$ and $x+y+1=0$.

5. Find the point dividing the line from $(-1, 3)$ to $(4, 7)$ externally in the ratio 4 to 3.

6. Write the equation of the tangent at $(1, 2)$ to the circle
$$x^2+y^2+4x+3y-15=0.$$

7. Find the equation of the circle through $(-2, -2)$, $(-2, 0)$, and $(0, -2)$.

8. Find the equation of the radical axis of the circles
$$2x^2+2y^2-3x-y=0 \text{ and } x^2+y^2+2x-y+1=0.$$

9. Find the length of the longest possible chord through $(1, -2)$ for the circle $x^2+y^2=16$.

10. Find the length of the common chord of the circle $x^2+y^2=36$ and the parabola $y^2=5x$.

CONTINUED OVER→

Approximate Percentage Values

10×3

11. Find the equation of the line through $(-2, 3)$ and perpendicular to the line $2x-5y-6=0$.

12. Find the sum of the distances from the point $(8, 2)$ on the hyperbola $xy=16$ to the two asymptotes.

13. Find the length of the tangent from the point $(5, 4)$ to the circle with centre $(-1, -2)$ and radius 2.

14. Find the sum of the abscissae of the points of intersection of the line $y=3x$ and the curve $y=x^3$.

15. Find the locus of a point such that its distance from the origin is three times its distance from the point $(1, 2)$.

16. Find the distance from the right focus to the left vertex of the ellipse $4x^2+25y^2=100$.

17. Find the distance between the right focus of the hyperbola $16x^2-9y^2=1$ and the left focus of the ellipse $4x^2+9y^2=36$.

18. Write the equation of the hyperbola which has the same foci as the hyperbola $9x^2-4y^2=36$, but which has a transverse axis half as long.

19. Find the distance between the two lines $y=3x+2\sqrt{10}$ and $y=3x-2\sqrt{10}$.

20. Find the equation of the parabola with focus $(-1, 3)$ and directrix $x+2y=0$.

CONTINUED→

Approximate Percentage Values

4 21. Find the equation of the circle through the origin and through the points of intersection of the circles

$$x^2+y^2=16 \text{ and } x^2+y^2-4x-6y+32=0.$$

4 22. Find the distance between the points of intersection of the line $x-y-6=0$ and the parabola $y^2=8x$.

4 23. Find the slope of each of the tangents from the point $(-1, 2)$ to the parabola $y^2=4x$.

4 24. Find the perimeter of the figure formed by one side of a square inscribed in the circle $x^2+y^2=16$ and the minor arc cut off by this side.

4 25. A tangent to the parabola $y^2=3x$ has slope 2 and meets the two axes at A and B. Find the sum of the lengths of OA and OB.

5 26. Find the abscissae of the end points of the focal chord of slope 2 for the parabola $y^2=8x$.

5 27. Find the area of that part of the ellipse $25x^2+9y^2=225$ which lies outside the quadrilateral formed by the two foci and the ends of the minor axis.

Answer any TWO of Questions 28, 29, and 30.

2×5

28. Find the sum of the slopes of the bisectors of the angles between the lines $3x-4y+1=0$ and $5x+12y+8=0$.

29. Find the sum of the squares of the ordinates of the points of intersection of the line $y=2x-1$ and the curve $y=x^3-3x^2+4x-1$.

30. Given that (a, b) is a point lying on the line $2x-3y-8=0$, find the minimum value of the quantity a^2+b^2.

««« THE END »»»

GEOMETRY

1967

ANSWER FOLDER

You *must* record your answers on this Answer Folder.

NOTE. *At the close of the examination, the Answer Folder is to be placed on top of your examination book and inserted in the envelope.*

1. The equation of the line is

....

2. The length of the perpendicular is

....

3. The equation of the family of lines is

....

4. The angle between the lines is

....

5. The point dividing the line externally in the ratio 4 to 3 is

....

6. The equation of the tangent is

....

7. The equation of the circle is

....

8. The equation of the radical axis is

....

9. The length of the longest possible chord is

....

10. The length of the common chord is

....

→ *CONTINUED OVER* →

11. The equation of the line is

....

12. The sum of the distances is

....

13. The length of the tangent is

....

14. The sum of the abscissae is

....

15. The equation of the locus is

....

16. The required distance is

....

17. The required distance is

....

18. The equation of the hyperbola is

....

19. The distance between the two lines is

....

20. The equation of the required parabola is

....

21. The equation of the required circle is

....

22. The distance between the points of intersection is

....

23. The slopes of the tangents are

....

24. The required perimeter is

....

25. The sum of the lengths of OA and OB is

....

26. The abscissae of the end points of the focal chord are

....

27. The required area is

....

28. The sum of the slopes of the bisectors is

....

29. The sum of the squares of the ordinates of the points of intersection is

....

30. The minimum value of a^2+b^2 is

....

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ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

TRIGONOMETRY AND STATICS

2 HOURS

NOTE 1. *The Presiding Officer will place Parts I, II, and III on your desk at 1.30 p.m. Part II, to which approximately 21% of the marks will be allotted, and Part III, to which approximately 15% of the marks will be allotted, may be answered at any time during the examination period. You are advised to allow approximately 45 minutes for Parts II and III.*

NOTE 2. *You should obtain a set of mathematical tables and a supply of graph paper from the Presiding Officer. Leave a right-hand (lined) page of your examination book blank and fasten the graph paper to it.*

pproximate ercentage Values

PART I

15 1. Answer *either* (*a*) *or* (*b*).

either

(*a*) Prove that in triangle ABC,

$$c^2=a^2+b^2-2ab\cos C$$

for (i) $C<90°$, (ii) $C>90°$, (iii) $C=90°$.

or

(*b*) (i) Prove that $\log_a \dfrac{x}{y}=\log_a x-\log_a y$.

(ii) Prove that

$$\cos A+\cos B=2\cos\frac{A+B}{2}\cos\frac{A-B}{2}.$$

10 2. (*a*) Prove the identity

$$\tan u+\tan^2 u\ \tan 2u=\tan 2u-\tan u.$$

(*b*) State the values of u between 0 and 2π inclusive for which this identity is not true.

12 3. (*a*) Using the graph paper provided, draw the graph of

$$y=2\sin x$$

for $-\pi\le x\le\pi$.

(*b*) Find the co-ordinates of the points on the graph satisfying the relation $y=-1$.

CONTINUED OVER

Approximate
Percentage
Values

12 4. A ladder rests with one end on a rough horizontal floor and the other against a smooth vertical wall with which it makes an angle of 30°. The ladder is on the point of slipping when a man weighing 150 lb. stands on it two-thirds of the way from the bottom. Neglecting the weight of the ladder, calculate the coefficient of friction between the ladder and the floor. (Give the answer in decimal form to two significant digits.)

15 5. (*a*) Two parallel chords are on the same side of the centre of a circle. The angles subtended at the centre of the circle by these chords are 4α and 4β $(\alpha < \beta)$. If the distance between the chords is k, and the radius of the circle is r, show that

$$r=\frac{k}{2}\operatorname{cosec}(\beta+\alpha)\operatorname{cosec}(\beta-\alpha).$$

(*b*) Without using logarithms, calculate the value of r, to two decimal places, if

$$k=0.85 \text{ ft.},\ \alpha=11°30',\ \beta=18°30'.$$

..... THE END OF PART I

TRIGONOMETRY AND STATICS

1967

PART II

NOTE 1. *Each item in Part II has a percentage value of 3.*

NOTE 2. *Calculations necessary for Part II may be made in the blank spaces on this sheet, or on an unused left-hand page in the examination book.*

NOTE 3. *Only those answers which are indicated clearly in the answer column at the right will be marked.*

NOTE 4. *At the close of the examination, this answer sheet is to be placed on top of your examination book and inserted in the envelope.*

— — — —

There are four suggestions for completing each of the following incomplete statements. Select the correct completion and circle its letter in the answer column at the right.

1. The value of $\tan 300° + \cot(-300°)$ is

(A) $-\frac{4}{\sqrt{3}}$ (C) $\frac{2}{\sqrt{3}}$

(B) $-\frac{2}{\sqrt{3}}$ (D) $\frac{4}{\sqrt{3}}$

1. A B C

2. If the coefficient of friction between two surfaces is 0.25, then the angle of friction, to the nearest degree, is

(A) 14° (C) 49°

(B) 41° (D) 76°

2. A B C

3. The area of an equilateral triangle is $\triangle$. The side of this triangle is

(A) $\frac{3}{2}\sqrt{3\triangle\sqrt{3}}$ (C) $\frac{2}{3}\sqrt{3\triangle\sqrt{3}}$

(B) $\frac{3}{2}\sqrt{2\triangle\sqrt{2}}$ (D) $\frac{2}{3}\sqrt{2\triangle\sqrt{2}}$

3. A B C

4. If $y = \sec u$, then

(A) $y \geq 1$ only (C) $y \leq -1$ only

(B) $y \leq -1$ or $y \geq 1$ (D) $-1 \leq y \leq 1$

4. A B C

5. As t increases, $\sin t$ and $\cos t$ both increase when t is in quadrant

(A) I (C) III

(B) II (D) IV

5. A B C

CONTINUED OVER

Approximate
Percentage
Values

12 4. A ladder rests with one end on a rough horizontal floor and the other against a smooth vertical wall with which it makes an angle of 30°. The ladder is on the point of slipping when a man weighing 150 lb. stands on it two-thirds of the way from the bottom. Neglecting the weight of the ladder, calculate the coefficient of friction between the ladder and the floor. (Give the answer in decimal form to two significant digits.)

15 5. (*a*) Two parallel chords are on the same side of the centre of a circle. The angles subtended at the centre of the circle by these chords are 4α and 4β $(\alpha < \beta)$. If the distance between the chords is k, and the radius of the circle is r, show that

$$r=\frac{k}{2}\operatorname{cosec}(\beta+\alpha)\operatorname{cosec}(\beta-\alpha).$$

(*b*) Without using logarithms, calculate the value of r, to two decimal places, if

$$k=0.85 \text{ ft.}, \quad \alpha=11°30', \quad \beta=18°30'.$$

. . . . . THE END OF PART I

TRIGONOMETRY AND STATICS

1967

PART II

NOTE 1. *Each item in Part II has a percentage value of 3.*

NOTE 2. *Calculations necessary for Part II may be made in the blank spaces on this sheet, or on an unused left-hand page in the examination book.*

NOTE 3. *Only those answers which are indicated clearly in the answer column at the right will be marked.*

NOTE 4. *At the close of the examination, this answer sheet is to be placed on top of your examination book and inserted in the envelope.*

— — — —

There are four suggestions for completing each of the following incomplete statements. Select the correct completion and circle its letter in the answer column at the right.

1. The value of $\tan 300° + \cot(-300°)$ is

(A) $-\frac{4}{\sqrt{3}}$

(B) $-\frac{2}{\sqrt{3}}$

(C) $\frac{2}{\sqrt{3}}$

(D) $\frac{4}{\sqrt{3}}$

1. A B C D

2. If the coefficient of friction between two surfaces is 0.25, then the angle of friction, to the nearest degree, is

(A) 14°

(B) 41°

(C) 49°

(D) 76°

2. A B C D

3. The area of an equilateral triangle is $\triangle$. The side of this triangle is

(A) $\frac{3}{2}\sqrt{3\triangle\sqrt{3}}$

(B) $\frac{3}{2}\sqrt{2\triangle\sqrt{2}}$

(C) $\frac{2}{3}\sqrt{3\triangle\sqrt{3}}$

(D) $\frac{2}{3}\sqrt{2\triangle\sqrt{2}}$

3. A B C D

4. If $y = \sec u$, then

(A) $y \geq 1$ only

(B) $y \leq -1$ or $y \geq 1$

(C) $y \leq -1$ only

(D) $-1 \leq y \leq 1$

4. A B C D

5. As t increases, $\sin t$ and $\cos t$ both increase when t is in quadrant

(A) I

(B) II

(C) III

(D) IV

5. A B C D

CONTINUED OVER →

6. If $x = \log_3 \frac{1}{2}$, then

(A) $x > 1$

(B) $0 < x < 1$

(C) $-1 < x < 0$

(D) $x = -1$

7. The value of $\tan \frac{\pi}{8}$ is

(A) $\sqrt{2}+1$

(B) $3+\sqrt{2}$

(C) $3-\sqrt{2}$

(D) $\sqrt{2}-1$

««« THE END OF PART II »»»

6.
A B C D

7.
A B C D

TRIGONOMETRY AND STATICS

1967

PART III

NOTE 1. *Each item in Part III has a percentage value of 3.*

NOTE 2. *Calculations for Part III may be made in the blank spaces between the questions on this sheet, or on an unused left-hand page in the examination book.*

NOTE 3. *At the close of the examination, this answer sheet is to be placed on top of your examination book and inserted in the envelope.*

— — — —

Write your ANSWERS in the right-hand column on this sheet.

Where applicable, answers are to be left in simplified surd form.

1. Angle x and angle y are both acute.

$$\cos x = \frac{12}{13} \text{ and } \cos y = \frac{4}{5} \cdot$$

The value of $\cos(x+y)$ is

2. Two forces of 10 lb. and 30 lb. act at a point, the angle between their directions being 120°. The magnitude of the resultant is

3. The roots of the equation $\sin 2x - \sin x = 0$

for the interval $-\frac{\pi}{2} < x < \frac{\pi}{2}$ are

4. In a triangle ABC, $a = 2$ in., $\angle B = 45°$, and $\angle C = 60°$. The area of the triangle is

5. $\log_2 3 = a$ and $\log_2 5 = b$.
$\log_2 2250$ in terms of a and b is

«« THE END »»

1. . . . .

2. . . . .

3. . . . .

4. . . . .

5. . . . .

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ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

PROBLEMS

3 HOURS

NOTE 1. ***Ten** questions will be sufficient for a complete paper, and a candidate's ten best attempts will count.*

NOTE 2. *All questions are of equal value.*

1. (*a*) Show that there is no greatest prime number.

   (*b*) Find the greatest power of 2 which divides 500! exactly.

2. The base of a triangular pyramid is an equilateral triangle with side k. The foot of the perpendicular from the vertex of the pyramid to the plane of the base is at the centre of the circle inscribed in it. The angle between any two non-base edges of the pyramid is 2α.

Show that the volume of this pyramid is

$$V = \frac{k^3}{24}\sqrt{\frac{\sin 3\alpha}{\sin^3 \alpha}}\,.$$

For what values of α is the problem defined?

HINT: The volume V of the pyramid is $\frac{1}{3}Ah$ where A is the area of the base and h is the length of the perpendicular from the vertex to the plane of the base.

3. An unknown polynomial yields a remainder of 2 when divided by $x-1$, a remainder of 3 when divided by $x-2$, and a remainder of 1 when divided by $x-3$. Find the remainder when this polynomial is divided by $(x-1)(x-2)(x-3)$.

4. An hyperbola of eccentricity e is given. If A is the angle between the asymptotes, compute the value of sec A in terms of e.

CONTINUED OVER→

5. Consider the matrix

$$A=\begin{bmatrix} \cos\frac{\pi}{n} & \sin\frac{\pi}{n} \\ -\sin\frac{\pi}{n} & \cos\frac{\pi}{n} \end{bmatrix}$$

where n is an integer. Calculate A^2 and A^3, and find the least positive power p of A for which $A^p=\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$. Show that the integral powers of A form a commutative group with respect to multiplication. Name a plane figure having this group as part of its symmetry group.

6. Given the points $P(2, 1, 3)$, $Q(1, 2, 1)$, $R(-1, -2, -2)$, and $S(-1, 4, 0)$.

(*a*) Show that the lines PQ and RS are skew.

(*b*) Find the shortest distance between PQ and RS, given that the common perpendicular to these two lines is also perpendicular to the plane $x+y=k$.

7. Find the sum to n terms and its limit as $n \to \infty$, for the series

$$S=1+3\cdot 2\cdot x+5\cdot 2^2\cdot x^2+7\cdot 2^3\cdot x^3+\ \dots$$

where the nth term of the series is $(2n-1)2^{n-1}x^{n-1}$.

8. If $e_1, e_2, \dots, e_n$ are the roots of the equation

$$z^n-1=0$$

show that

$$(1-e_1)(1-e_2)(1-e_3)\dots(1-e_{n-1})=n,$$

given that $e_n=1$.

9. Given that

$$p_{n+1}=\gamma p_n+(1-\gamma)p_{n-1}\ ,$$
$$p_0=0,\ p_1=1-\gamma$$

show that

$$p_{n+1}=\left[\frac{1-(\gamma-1)^{n+1}}{2-\gamma}\right](1-\gamma),\quad \gamma\neq 2$$

What is a solution p_n of the recurrence relation when $\gamma=2$?

10. An airplane carries sufficient fuel that it has a still-air range of R miles at a constant speed of V miles per hour. In a steady prevailing wind whose speed is v miles per hour, the airplane flies from a point A to a point P and then returns to A. Show that P can be any point within or on the closed curve whose equation, in polar co-ordinates (r, θ) with pole at A and polar axis in the direction of the prevailing wind, is

$$r = \frac{R}{2v} \frac{(V^2 - v^2)}{(V^2 - v^2 \sin^2 \theta)^{1/2}} .$$

11. If A, B, and C are angles in a triangle, prove:

(*a*) $\sin A + \sin B + \sin C = 4 \cos \frac{A}{2} \cos \frac{B}{2} \cos \frac{C}{2}$.

(*b*) $$\frac{\sin C}{\sin A} \; \frac{\sin \frac{A}{3}}{\sin \frac{C}{3}} \; \frac{\sin\left(\frac{\pi}{3} - \frac{A}{3}\right)}{\sin\left(\frac{\pi}{3} - \frac{C}{3}\right)} = \frac{\sin\left(\frac{\pi}{3} + \frac{C}{3}\right)}{\sin\left(\frac{\pi}{3} + \frac{A}{3}\right)}$$

12. Suppose that m is a positive integer, and that n is a rational number such that

$$\frac{1}{m} + \frac{1}{n} = 1.$$

Considering only $x \geq 0$, show that the graph of the function defined by

$$y = \frac{x^m}{m} + \frac{1}{n} - x$$

has an absolute minimum when $x = 1$.

Hence deduce that for any two real numbers α and β,

$$\frac{|\alpha|^m}{m} + \frac{|\beta|^n}{n} \geq |\alpha \beta| .$$

13. A right circular cone is generated by revolving an isosceles triangle of fixed perimeter $2k$ about its axis of symmetry. Find the ratio of length of side to length of base in the triangle which produces the cone of greatest volume.

14. A beam of length 27 feet is to be moved in a horizontal position along a corridor 8 feet wide and around a right-angled corner into a second corridor x feet wide. What is the least value of x which will permit the beam to be moved around the corner? (Neglect the width of the beam.)

CONTINUED OVER→

15. (*a*) Suppose 4 children A, B, C, D are throwing a ball at random to one another. If A had the ball initially, complete the following table, which gives the probability $P_A(n)$, $P_B(n)$, etc., that a particular child has the ball after n throws.

n	$P_A(n)$	$P_B(n)$	$P_C(n)$	$P_D(n)$
0	1	0	0	0
1	0	1/3	1/3	1/3
2	1/3	2/9	2/9	2/9
3	2/9	7/27	7/27	7/27
4				
5				

(*b*) Now suppose that N children are playing the same game. Find the probability that a particular child has the ball after n throws if that child

(i) had the ball initially,
(ii) did not have the ball initially.

(The information contained in Question 9 may be assumed without proof.)

««« THE END »»»

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ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

BIOLOGY

2 HOURS

NOTE. *The Presiding Officer will place both Part I and Part II on your desk at 9.00 a.m. Part II, to which approximately 25% of the marks will be allotted, may be answered at any time during the examination period.*

PART I

NOTE. *Answer only* ***ONE*** *question from* ***EACH*** *of Sections A, B, C, and D. All questions in Part I are approximately equal in value.*

Section A

Answer *either* Question 1 *or* Question 2.

either

1. (*a*) Biological communities may be characterized by a one-way flow of material and energy. Account for the pyramid of biomass or of energy on the basis of this material and energy flow.

(*b*) List *three* kinds of associations of closely interdependent organisms. Give *one* example of each kind of association together with the effect of the association on each organism concerned.

(*c*) Give *four* primary sources of genetic variation.

(*d*) Environmental selection of heritable variations is suggested as a cause of evolution. By means of an example explain how this selection operates.

or

2. (*a*) Describe, with a suitable example for each, *four* different kinds of movements in living organisms.

(*b*) Describe the major tissues of support in a mammal and in a dicotyledonous plant. (Omit cellular detail.)

(*c*) Discuss the purpose and principles of the classification of organisms.

CONTINUED OVER→

Section B

Answer *either* Question 3 *or* Question 4.

either

3. Homeostasis or the steady state is the constancy of the internal environment of an organism.

(*a*) What is the general principle by which homeostasis is maintained?

(*b*) Give a detailed account, based on an example, of the regulation of hormone balance in animals.

(*c*) Give a detailed account of transpiration as a means of regulation of temperature and of water in plants.

or

4. Mammals receive information from the external environment, as well as from the parts of the body, by way of the nervous system. As a result, they can make extremely rapid adjustments to change.

With reference to nervous coordination, answer *each* of the following questions.

(*a*) What is the meaning of irritability?

(*b*) What is the nature of a stimulus? List *five* stimuli from the external environment.

(*c*) For any *one* special receptor for stimuli show the relationship between the stimulus and the central nervous system. (Anatomical details are not required.)

(*d*) Describe the relationship between sensory and motor nerves.

(*e*) Describe the synapse and how the nerve impulse is transmitted over it.

(*f*) Describe briefly the function of the autonomic (involuntary) nervous system.

CONTINUED→

Section C

Answer *either* Question 5 *or* Question 6.

either

5. In multicellular organisms many cells are often far removed from the external environment and are surrounded by an internal environment.

(*a*) Why is extra-cellular digestion necessary for animals and non-green plants?

(*b*) Outline, in proper sequence, the entire digestive system of a mammal.

(*c*) Outline the absorption system of a higher plant.

(*d*) Outline the transport systems of both a plant and an animal.

(*e*) State the kinds and sources of metabolic wastes produced by plants and by animals.

or

6. (*a*) State the relative biological importance of sexual and asexual reproduction.

(*b*) Explain, in some detail, how a new individual arises in sexually reproducing organisms, with reference to those general features that are *common* to plants and animals.

(*c*) Explain what is meant by the terms "differentiation" and "growth", and state the role of each in development.

(*d*) State and explain the factors that tend to regulate populations of plants and animals.

SECTION D, OVER →

Section D

Answer *either* Question 7 *or* Question 8.

either

7. It is possible to grow small groups of cells from animals (kidney cells) or from plants (carrot root cells) in a tissue culture medium. The successful maintenance of these cultures depends upon certain conditions.

(*a*) (i) List *seven* different types of chemical substances which should be included in the medium.

(ii) Explain why each type of substance given in answer to (i) is necessary.

(*b*) Identify and describe the processes by which various substances enter and leave cells and give an example of a substance for each process.

(*c*) What environmental conditions must be regulated to maintain the culture?

or

8. The cells of living organisms contain a very large number of enzymes.

(*a*) What is the chemical nature of an enzyme?

(*b*) State the functional role of enzymes in cells.

(*c*) Describe where and how enzymes are synthesized in cells.

(*d*) Some amino acids give rise, by deamination, to intermediates in the citric acid (Krebs) cycle. How does the oxidation of enzymes provide energy for the work of cells?

THE END OF PART I

BIOLOGY

1967

PART II

(approximately 25% of the total)

NOTE 1. *All items in Part II are equal in value.*

NOTE 2. *Only those answers which are indicated clearly in the answer column at the right will be marked.*

— — — —

There are four suggestions for answering or completing each of the following questions or incomplete statements. Select the correct response, and circle its *letter* in the answer column at the right.

1. In the adults of higher organisms many cells have lost the ability to
   (A) synthesize
   (B) excrete
   (C) respire
   (D) divide

1. A B C D

2. The hydrolysis of starch yields
   (A) glucose
   (B) glucose-6-phosphate
   (C) urea
   (D) lactose

2. A B C D

3. The presence of albumin in the urine indicates
   (A) secretion by the kidney
   (B) inadequate blood circulation
   (C) lack of thyroxin
   (D) degeneration of the kidney

3. A B C D

4. The respiratory muscles are controlled by the
   (A) phrenic nerve
   (B) sciatic nerve
   (C) brachial nerve
   (D) olfactory nerve

4. A B C D

5. Orientation to light by the apical region of a plant is associated with
   (A) phytochrome
   (B) gibberellin
   (C) auxin
   (D) kinetin

5. A B C D

6. A dorsal root ganglion contains the cell bodies of
   (A) motor neurons
   (B) mixed neurons
   (C) sensory neurons
   (D) peripheral neurons

6. A B C D

7. The Bowman's capsule of a nephron
   (A) forms urea
   (B) returns material to the blood
   (C) extracts only water
   (D) collects the material filtered from the blood

7. A B C D

8. Which one of the following foods yields the most energy per gram when oxidized?
   (A) cheese
   (B) butter
   (C) cornstarch
   (D) cabbage

8. A B C D

9. Glycogen and starch are digested by
   (A) amylases
   (B) lipases
   (C) proteinases
   (D) phosphatases

9. A B C D

CONTINUED OVER →

10. The elasticity of the walls of arteries plays a role in regulating
(A) digestion of protein
(B) blood pressure
(C) pulse rate
(D) absorption of water in the colon

10. A B C D

11. Photoperiodism is the response of plants to
(A) the direction of incident light
(B) the intensity of incident light
(C) the duration of incident light
(D) the quality of incident light

11. A B C D

12. In the mammal, the pacemaker of the heart is
(A) the left atrium (auricle)
(B) the medulla oblongata
(C) the sinu-auricular node
(D) the node of Ranvier

12. A B C D

13. Some fish oils are irradiated in order to increase their content of
(A) vitamin A
(B) vitamin B
(C) vitamin C
(D) vitamin D

13. A B C D

14. The energy required for glomerular filtration is supplied by
(A) active work of capsule cells
(B) blood pressure
(C) a pituitary hormone
(D) the loop of Henle

14. A B C D

15. The depth and rate of breathing are jointly controlled by the
(A) concentration of carbon dioxide in the lungs
(B) concentration of oxygen in the lungs
(C) concentration of lactic acid in muscles
(D) effect of concentration of carbon dioxide in the medulla oblongata

15. A B C D

16. Water content and inorganic salt composition of vertebrate body fluids are regulated by secretions from the
(A) adrenal cortex
(B) anterior pituitary
(C) pancreas
(D) adrenal medulla

16. A B C D

17. Studies on DNA coding indicate that each amino acid is coded in
(A) a nucleotide
(B) a triplet of sugars
(C) a triplet of nucleic bases
(D) a triplet of phosphates

17. A B C D

18. The wall of a plant cell consists primarily of
(A) sucrose
(B) cellulose
(C) fructose
(D) pectin

18. A B C D

19. Which one of the following reactions does not represent a type of respiration?
(A) glucose → lactic acid+energy
(B) hydrogen sulphide+carbon dioxide+energy → sulphur+water+carbohydrate
(C) butyl alcohol+oxygen → acetone+water+energy
(D) glucose → alcohol+carbon dioxide+energy

19. A B C D

20. The nucleolus is
(A) the division centre of the cell
(B) the control centre of the cell
(C) the source of RNA in cells
(D) the location of special genes in the cell

20. A B C D

21. Before birth, the human embryo eliminates its metabolic wastes through the
(A) mammary glands
(B) yolk sac
(C) placenta
(D) ovaries

22. Parthenogenesis means
(A) spontaneous generation
(B) maturation
(C) mutation
(D) development of an unfertilized egg

23. Genes are
(A) the hereditary material found in the nucleolus
(B) arranged in a linear manner along the chromosomes
(C) composed of RNA
(D) replicated only during meiosis

24. Oxygen is distributed to the cells of the body after
(A) mixing with the blood in the lungs
(B) combining with red blood corpuscles in the lungs
(C) gaseous exchange in the bronchioles
(D) solution in the plasma and diffusion into the red corpuscles

25. Auxins are plant hormones that
(A) are produced in the apical meristems
(B) are translocated in all directions
(C) cause cells to divide more rapidly
(D) cause all movements in plants

26. Photosynthesis is a series of reactions that
(A) occurs in all plants
(B) liberates carbon dioxide and water from organic compounds
(C) is independent of the concentration of carbon dioxide
(D) converts radiant energy to chemical energy in organic compounds

27. The asters of dividing cells are organized in relation to the
(A) centrioles
(B) Golgi bodies
(C) centromeres
(D) chromonemata

28. Viruses
(A) can reproduce outside of living cells
(B) contain only RNA or DNA
(C) use the synthetic machinery of the infected cell to make additional virus particles
(D) infect host cells by penetration of the cell membrane by the entire virus particle

29. Meiosis is a method of cell division that
(A) produces gametes
(B) provides one set of chromosomes in each daughter cell
(C) produces identical daughter cells
(D) provides for growth of the organism

30. The alternation of generations is
(A) found in all plants and animals
(B) common to all sexually reproducing organisms
(C) confined to animals
(D) confined to plants

«« THE END »»

21. A B C D
22. A B C D
23. A B C D
24. A B C D
25. A B C D
26. A B C D
27. A B C D
28. A B C D
29. A B C D
30. A B C D

1867 1967

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

PHYSICS

2 HOURS

NOTE 1. *The Presiding Officer will place Part I, Part II, a data sheet, and a velocity-time graph-sheet on your desk at 1.30 p.m. Part II, to which approximately 30% of the marks will be allotted, may be answered at any time during the examination period. You should allow approximately 35 minutes for Part II.*

NOTE 2. *The values appearing on the data sheet may be used throughout this examination.*

PART I

(*All questions are approximately equal in value.*)

Section A

Answer THREE questions in Section A. (*If Question 1 is attempted, include the graph-sheet in your answer book.*)

1. Refer to the velocity-time graph provided and note that DOWNWARD velocities are POSITIVE. This graph shows the velocity of a pilot after he was ejected upward from his aircraft. The velocity-time graph levels out in the segment DE because increasing air friction brought the pilot to a constant downward velocity of 100 metres/second. His parachute opened when $t=40$ seconds. When $t=0$ the altitude of the pilot was 3000 metres.

(*a*) What forces acted on the pilot when $t=39$ seconds, and how did the forces compare in magnitude? (No calculations are necessary.)

(*b*) What was the maximum altitude reached by the pilot?

(*c*) If the parachute had not opened, at what time and with what speed would the pilot have reached the ground?

(*d*) Determine the net or unbalanced force, in newtons, which acted on the pilot when $t=10$ seconds. The mass of the pilot was 90 kilograms.

2. NOTE. *You should obtain a supply of graph paper from the Presiding Officer for use in answering this question. Leave a right-hand* (*lined*) *page of your examination book blank and fasten the graph paper to it.*

When a mass is placed on the free end of a diving board this end is deflected downward. The table below shows the down-

CONTINUED OVER

ward deflections d corresponding to various lengths l of the diving board as measured in an experiment. Each deflection was produced by the same mass.

Length of diving board l (metres)	Downward deflection d (centimetres)
1.0	0.4
2.0	3.0
3.0	10.0
4.0	24.0
5.0	46.5

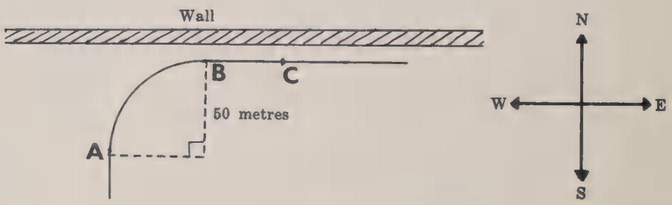
(*a*) Present these data on the graph-paper provided by the Presiding Officer in a way which clearly demonstrates that d is proportional to one of the following expressions:

$$\frac{1}{l},\ l^2,\ \frac{1}{l^2},\ l^3,\ \sqrt{l}\,.$$

(*b*) State the equation which relates d and l.

(*c*) Determine the deflection when the length of the diving board is 4.2 metres.

3.



A truck of mass 1500 kilograms is travelling in a fog due north at 20 metres/second. Suddenly, at point A, the driver notices a wall straight ahead. He makes a sharp right turn along path AB, which is one-quarter of a circle of 50 metres radius. He does this without any change in speed. From B to C he slows down uniformly, arriving at C with a velocity of 15 metres/second due east. The trip from A to C takes 5.0 seconds.

Calculate

(*a*) the magnitude of the average acceleration of the truck from A to C,

(*b*) the instantaneous centripetal acceleration of the truck at the mid-point of the arc AB,

(*c*) the magnitude of the force which the ground must exert on the truck at any point on the arc AB,

(*d*) the impulse exerted by the ground on the truck from B to C,

(*e*) the work done by the centripetal force acting on the truck as it moves from A to B.

4. A 6-kilogram trolley travelling at 6 metres/second eastward approaches and collides with a 2-kilogram trolley travelling at 2 metres/second in the same direction on the same track. The collision is cushioned by a perfectly elastic spring attached to the front of the heavier trolley.

Calculate, neglecting friction,

(*a*) the speed of each of the trolleys after they separate,

(*b*) the potential energy stored in the spring at minimum separation.

Section B

Answer ONE question in Section B.

5. (*a*) Sketch a graph of the distribution of light intensity on a screen some distance from one narrow slit illuminated by light of a single wavelength.

(*b*) How would the pattern in (*a*) be affected in each of the following situations considered independently?

(i) The wavelength is increased.
(ii) The slit width is increased.
(iii) A second similar slit is opened very close to the first and parallel to it.

(*c*) An air wedge is made from two flat glass slides held together at one end and separated at the other end by one thickness of thin paper. Yellow sodium light, of wavelength 5900 angstroms, falls normally on the air wedge. Transverse interference bands are observed by reflected light. The dark bands are counted along the air wedge. What is the difference in thickness of the air wedge between the positions of the fifth and ninth dark bands?

(*d*) How would the pattern in (*c*) be affected in each of the following situations considered independently?

(i) The yellow light is replaced by violet light.
(ii) The one thickness of thin paper is replaced by thicker paper.
(iii) The space between the slides is filled with water.

6. The antenna of a radio station consists of two towers (to be considered as point sources) 30 metres apart along an east-west line and broadcasting in phase. The broadcast frequency is 1.0×10^7 cycles/second.

(*a*) In what directions is the intensity of the radio signal a maximum for listeners at a distance of 2 kilometres? Give your reasoning.

CONTINUED OVER

(*b*) What is the intensity of the radio signal received by a listener in a direction 30° East of North and 2 kilometres from the station? Give your reasoning.

(*c*) If the two towers were to transmit in opposite phase, state the directions in which the intensity is a minimum.

Section C

Answer TWO questions in Section C.

7. (*a*) Write an equation for the electric potential energy of a charge q_1 at a distance r from a second charge q_2.

(*b*) An excess of 3×10^{10} negative elementary charges is placed on a small object. What would be the magnitude of the electric field at a point 0.5 metre away?

(*c*) An alpha particle approaches the nucleus of a cadmium atom (atomic number $Z = 48$) with a kinetic energy of E joules. If the distance of closest approach is to be 6×10^{-14} metre, calculate the value of E.

(*d*) At a distance of 2×10^{-8} metre from the centre of a neutral cadmium atom, what is the electric potential energy of the alpha particle? The diameter of the cadmium atom is approximately 2 angstroms.

8. The structure of crystals may be investigated by using the diffraction of either particles or photons.

(*a*) X-rays of wavelength 3.3 angstroms are reflected from a crystal of metal. Calculate the energy of such photons.

(*b*) A beam of electrons is reflected from the same crystal of metal at the same angle. What are the wavelength, speed, and energy of these particles?

9. It is possible to propel a spacecraft in interplanetary space by the pressure of the sun's radiation against sails on the spacecraft. In answering the following questions, you will find it convenient to consider the radiation as consisting of a stream of photons whose average energy is 6×10^{-19} joule/photon.

(*a*) (i) Would it be better to make the sails of perfectly absorbing material or perfectly reflecting material?
(ii) Show by calculation how the thrusts in the two cases compare.

(*b*) Calculate the order of magnitude of the number of photons from the sun that would be required to give the same momentum to the spacecraft as a tiny meteorite whose mass is 10^{-10} kilogram and whose speed is 10^4 metres/second relative to the spacecraft.

(*c*) Is it possible to sail in a direction other than radially outward from the sun? Explain, using a diagram.

THE END OF PART I

PHYSICS
1967

PART II

NOTE 1. *All items in Part II are equal in value.*

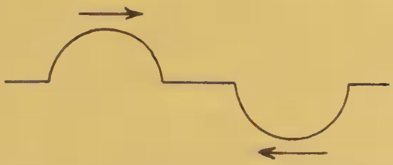
NOTE 2. *Only those answers which are indicated in the answer column at the right will be marked.*

NOTE 3. *You are advised to allow approximately 35 minutes for Part II.*

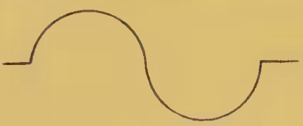
— — — —

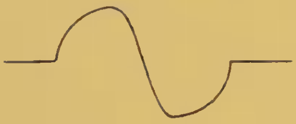
There are five suggestions for answering or completing each of the following questions or incomplete statements. Select the correct answer and circle its *letter* in the answer column at the right.

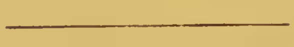
1. Two pulses, identical in shape but of the opposite phase, pass on a spring as shown.

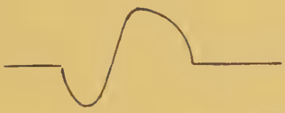


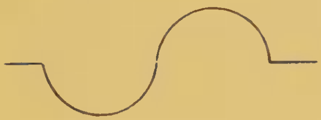
Which of the following diagrams does ***not*** represent a configuration of the spring as the pulses pass each other?

(A) 

(B) 

(C) 

(D) 

(E) 

1. A B C D E

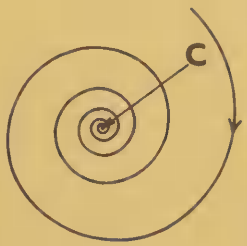
2. A rubber stopper is swung in a horizontal circle of radius 0.5 metre at a frequency of 2 turns/second. The inward force is supplied by a tension in the string equal to the weight of 6 metal washers. If the frequency and the radius are each doubled, the number of washers then required is

(A) 3
(B) 6
(C) 12
(D) 24
(E) 48

2. A B C D E

3. A particle moves with constant speed along a spiral path in the direction shown. Its acceleration is

(A) zero
(B) constant, and directed along the path
(C) constant, and directed approximately toward C
(D) increasing, and directed approximately toward C
(E) decreasing, and directed approximately toward C



3. A B C D E

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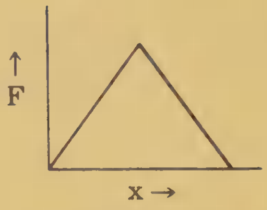
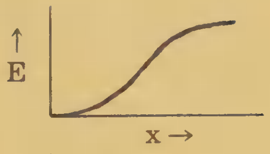
4. The following figure shows the total external force applied to an object initially at rest.

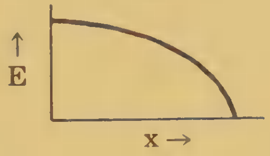


Which of the following figures best represents the variation of the kinetic energy of the object with its position?

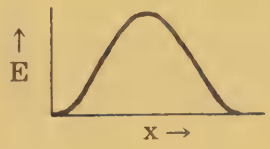
(A)



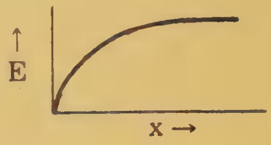
(B)



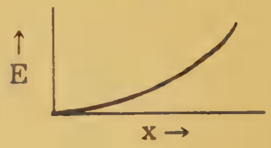
(C)



(D)



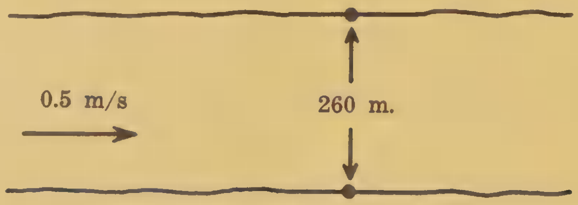
(E)



4.

A B C D E

5. A swimmer can travel 1.3 metres/second relative to the water. How long will it take him to swim from a point on one bank to a point directly across a river 260 metres wide and flowing at 0.5 metre/second?



(A) 1.4×10^2 seconds
(B) 2.0×10^2 seconds
(C) 2.2×10^2 seconds
(D) 3.2×10^2 seconds
(E) 5.2×10^2 seconds

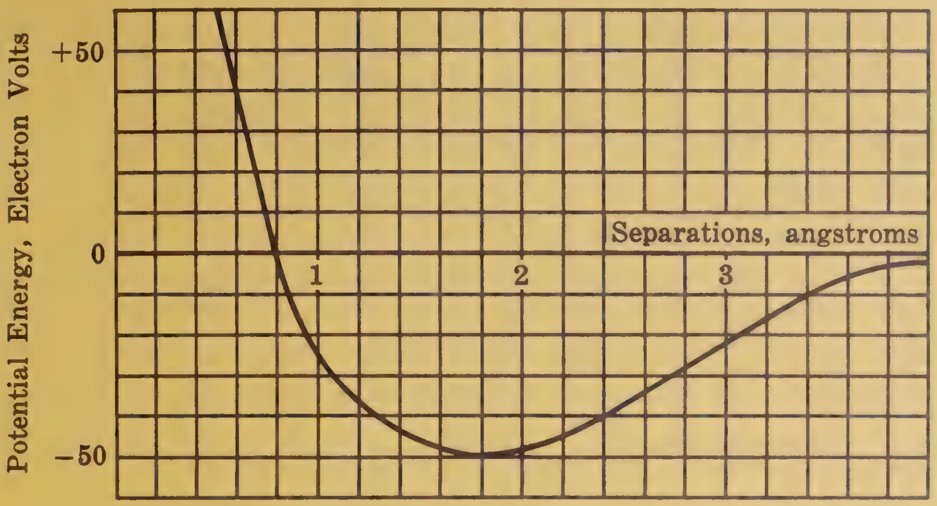
5.

A B C D E

6. A simple corpuscular model can account for

(A) Snell's law of refraction, but not the velocity of light in glass
(B) the law of reflection, but not Snell's law of refraction
(C) diffraction of electrons, but not of light
(D) diffraction, but not the photoelectric effect
(E) interference, but not diffraction

6.
A B C D E



The diagram above shows the dependence of the potential energy of a diatomic molecule on the separation of its two atoms. Use it in answering Questions 7 and 8 below.

7. The force between the atoms when their separation is 1 angstrom is

(A) attractive and 8×10^2 electron volts/angstrom
(B) repulsive and 8×10 electron volts/angstrom
(C) zero
(D) attractive and 25 electron volts
(E) repulsive and 25 electron volts

7.
A B C D E

8. In the ground state of the molecule, the separation of the atoms is about 1.8 angstroms and the kinetic energy is 10 electron volts. The number of electron volts of energy required to separate completely the atoms from each other is

(A) −50
(B) −25
(C) 25
(D) 40
(E) 50

8.
A B C D E

9. Which one of the following statements is true?

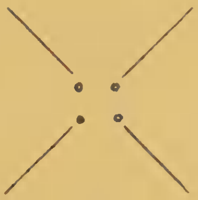
(A) The Rutherford model of the atom fails to predict correctly the results of low energy alpha particle scattering from atoms.
(B) The Bohr model provides a better description of alpha particle scattering than the Rutherford model.
(C) The Rutherford model is adequate for the description of alpha particle scattering but is not sufficient to explain the spectrum of atomic hydrogen.
(D) It is not possible to understand anything about alpha particle scattering without the use of quantum mechanics.
(E) The Rutherford model describes the scattering of alpha particles whose velocities are nearly equal to the velocity of light.

9.
A B C D E

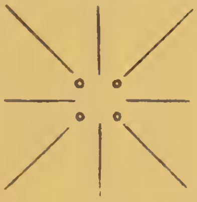
CONTINUED OVER→

10. In a ripple tank four point sources vibrate at the corners of a square, each of whose sides is one wavelength long. Which one of the following patterns will the lines of ***maximum*** disturbance form, if the four point sources vibrate in phase?

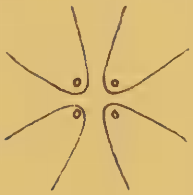
(A)



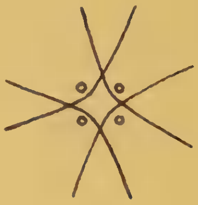
(B)



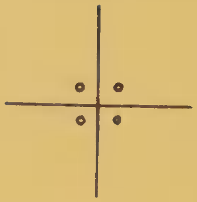
(C)



(D)



(E)



««« THE END »»»

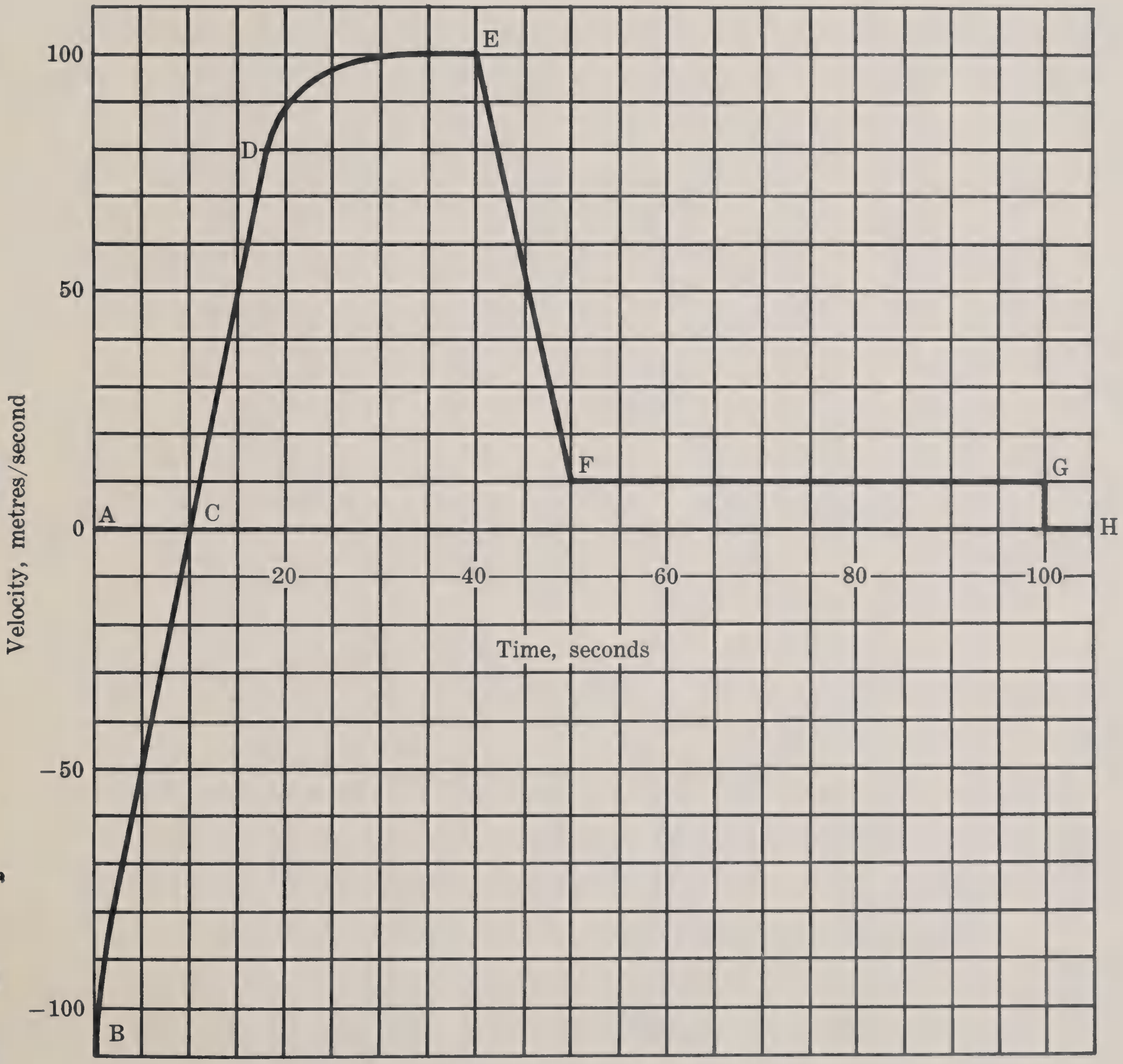
10.

A B C D

PHYSICS

1967

To be used in answering Question 1.



Note. Downward velocities are positive.

PHYSICS

1967

DATA SHEET

The following values may be used.

Acceleration due to gravity = 10 metres/second^2

Velocity of light in vacuum = 3.0×10^{8} metres/second

Planck's constant = 6.6×10^{-34} joule-second

Elementary charge = 1.6×10^{-19} coulomb

Mass of hydrogen atom = 1.7×10^{-27} kilogram

Mass of electron = 9.1×10^{-31} kilogram

Constant in Coulomb's law = $2.3\times10^{-28}\ \dfrac{\text{newton (metre)}^2}{\text{(elem. charge)}^2}$

1 angstrom = 10^{-10} metre

sin 30° = 0.50

1867 1967

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

CHEMISTRY

2 HOURS

NOTE. *The Presiding Officer will place both Part I and Part II on your desk at 1.30 p.m. Part II, to which approximately 30% of the marks will be allotted, may be answered at any time during the examination period. You are advised to allow approximately 30 minutes for it.*

PART I

NOTE 1. *All questions in Part I are approximately equal in value.*

NOTE 2. *The answers to numerical problems may be left in fractional form; where applicable the units are to be stated.*

1. (*a*) Write the formula of *each* of the following substances.

   (i) nickel(II) hypobromite
   (ii) bismuth(III) sulphate
   (iii) calcium formate
   (iv) ethylene glycol (structural formula)
   (v) tin(II) phosphate
   (vi) potassium peroxide

(*b*) Write a balanced equation for the reaction of iron(III) chloride with zinc.

(*c*) Write a balanced equation, for a reaction in aqueous solution, to illustrate the difference in activity of two metals other than zinc or iron.

2. (*a*) The following three oxides are acidic in varying degree:

$$P_2O_5,\ As_2O_5,\ SO_3.$$

State the order of acidities and explain how the acidities are related to the relative positions of phosphorus, arsenic, and sulphur in the periodic table.

(*b*) The geometrical arrangement of the cations and the anions in a crystal of sodium chloride is the same as in a crystal of potassium chloride. When crystals of each, of equal volume, are dissolved separately, and each solution is treated with excess silver nitrate, the quantity of silver chloride produced in the two cases is different. What do you deduce from these facts? Give your reasoning.

CONTINUED OVER

3. (*a*) Calculate the volume of a solution of potassium chromate, containing 200 g. of K_2CrO_4 per litre, that would be required to produce the related organic acid from 2.0 g. of ethanol (C_2H_5OH) by the following reaction.

$$3C_2H_5OH + 4K_2CrO_4 + 10H_2SO_4 \rightarrow \text{3 moles organic acid} + \text{other products}$$

(*b*) What is the weight of acid produced?

(*c*) Name the acid and give its structural formula.

($C=12.0$, $Cr=52.0$, $H=1.0$, $K=39.1$, $O=16.0$)

4. Permanganate-ion, containing 0.0549 g. of manganese, (Mn^{+7}) is reduced in aqueous solution to manganous-ion (Mn^{+2}) by 0.696 g. of a metal chloride, QCl_x, whereby chlorine gas is evolved. The specific heat of Q is 0.031. What is the valence (oxidation state) of Q?

($Cl=35.5$, $Mn=54.9$)

(Dulong & Petit constant=6.4)

Answer ***either*** *Question 5* ***or*** *Question 6.*

either

5. Calculate

(*a*) the gram-equivalent weight of an element whose fluoride contains 80.8% fluorine by weight,

(*b*) the concentration of sodium hydroxide, in moles per litre, in a 10.0% (by weight) solution of sodium hydroxide of density 1.109 g. per ml.,

(*c*) the volume of nitrogen at a given temperature and pressure which can be obtained by completely decomposing one litre of ammonia gas at the same temperature and pressure,

(*d*) the minimum volume of 0.10 molar silver nitrate required to precipitate the chloride-ion from 25 ml. of a 0.50 molar solution of magnesium chloride. (Assume that the chloride-ion is precipitated completely.)

($F=19.0$, $H=1.0$, $Na=23.0$, $O=16.0$)

or

6. (*a*) A direct current is passed through an aqueous solution of calcium bromide by using carbon electrodes.

(i) Write an ionic equation for the principal reaction which occurs at the anode. Explain briefly why this reaction occurs.

(ii) Write an ionic equation for the principal reaction which occurs at the cathode. Explain briefly why this reaction occurs.

(*b*) In the industrial preparation of pure copper from copper-bearing ore, concentration of the mineral is necessary prior to the electro-refining process.

Explain briefly how the mineral content of this finely ground ore is separated from the gangue.

Answer ***either*** *Question 7* ***or*** *Question 8.*

either

7. (*a*) You are given only ammonium sulphate and water as reagents. State how you would use these reagents to distinguish between the substances in each of the following pairs.

(i) sodium hydroxide and sodium chloride
(ii) potassium nitrate and barium chloride
(iii) copper sulphate solution and blue litmus solution

(*b*) Give balanced equations for the reactions in your answers to (i) and (ii) of (*a*).

(*c*) Describe a test to identify concentrated nitric acid.

or

8. (*a*) Make use of the periodic arrangement of the elements to account for the occurrence of electrovalence and covalence when various elements are combined in pairs to form compounds.

(*b*) Distinguish between *mass number* and *atomic weight.*

THE END OF PART I

CHEMISTRY
1967

PART II

Note 1. *You are advised to allow approximately 30 minutes for Part II.*

Note 2. *Only those answers which are indicated clearly in the answer column at the right will be marked.*

— — — —

SECTION A

(*Approximately 20% of the total*)

There are five suggestions for answering each of the following questions. Select the correct answer and circle its *letter* in the answer column at the right.

1. Which one of the following compounds contains an element in the oxidation state (unit oxidation number) +3?

(A) Na_2CO_3
(B) $Na_2S_2O_3$
(C) Na_2HPO_3
(D) H_3PO_4
(E) H_3N

1. A B C D E

2. Which one of the following ions gives a white precipitate when a large excess of sodium hydroxide is added to a solution containing it?

(A) NH_4^+
(B) Al^{+++}
(C) Zn^{++}
(D) Fe^{+++}
(E) Mg^{++}

2. A B C D E

3. Which one of the following compounds will give an aqueous solution having a pH of approximately 7?

(A) ammonium bisulphate
(B) ammonium acetate
(C) sodium sulphide
(D) calcium oxide
(E) aluminium chloride

3. A B C D E

4. Which one of the following oxides is the anhydride of nitrous acid?

(A) N_2O
(B) NO
(C) N_2O_3
(D) NO_2
(E) N_2O_5

4. A B C D E

5. Which one of the following values expresses the hydrogen-ion concentration, in gram-equivalent weights per litre, in a solution having a pH of 8?

(A) 8^{-10}
(B) 0.8×10^{-7}
(C) $-\log 8$
(D) 10^{-8}
(E) -10^{8}

5. A B C D E

6. Which one of the following substances is evolved as a gas when a mixture of $(NH_4)H_2PO_4$, $(NH_4)HCO_3$, AgCl, and $Na_2SO_4 \cdot 10H_2O$ is treated with sulphuric acid?

(A) NH_3
(B) CO_2
(C) HCl
(D) H_2O
(E) CO

6. A B C D E

7. Which one of the suggested operations leads to an increased concentration of sulphur trioxide when it is applied to the system at equilibrium represented by the following equation?

$$2SO_2 + O_2 \overset{400°C}{\rightleftharpoons} 2SO_3 + 45{,}200 \text{ cal.}$$

(A) decreasing the volume at 400°C
(B) lowering the pressure at 400°C
(C) adding argon at 400°C
(D) raising the temperature
(E) adding a catalyst

7. A B C D E

CONTINUED OVER

8. Which one of the following pairs of substances does ***not*** undergo a reaction which goes essentially to completion when the substances are mixed in aqueous solution?

(A) $CuCl_2$ and $AgNO_3$
(B) K_2CO_3 and $Pb(NO_3)_2$
(C) SO_3 and Na_2CO_3
(D) $Al_2(SO_4)_3$ and NH_3
(E) HCl and Br_2

8.
A B C D E

9. Which one of the following substances is liberated at the anode in the electrolysis of an aqueous solution of sodium chloride?

(A) Na
(B) NaOH
(C) Cl_2
(D) H_2
(E) O_2

9.
A B C D E

10. Which one of the following is produced when limestone is dissolved by rain water containing carbon dioxide?

(A) temporarily hard water
(B) permanently hard water
(C) lime-water
(D) calcium carbonate solution
(E) carbonic acid

10.
A B C D E

SECTION B

(Approximately 10% of the total)

For each of the questions which follow, insert the correct word, symbol or number in the space provided in the answer column at the right.

11. What is the molecular weight of an acid whose molecule contains three replaceable hydrogen atoms and whose equivalent weight is 47.31?

11. ....

12. How many equivalents of acid are required to neutralize one mole of a base having the formula M_2O_3?

12. ....

13. What is the nuclear symbol used to designate the α-particle?

13. ....

14. Name a metallic element which is in the fourth group of the periodic table.

14. ....

15. What particle is required to complete the following equation?

$${}_{83}Bi^{209} + \_\_\_\_ \rightarrow {}_{84}Po^{210} + {}_0n^1$$

15. ....

16. Which is the lightest element that forms an oxide having a formula of the type X_2O_3?

16. ....

17. What element must be combined with iron to make steel?

17. ....

18. What name is given to the process whereby hydrocarbons of high molecular weight are converted by strong heating to compounds of low molecular weight?

18. ....

19. What chemical operation will convert a liquid oil to a solid fat?

19. ....

20. Who discovered that atoms are largely "empty space" with most of the mass concentrated in a tiny core?

20. ....

««« THE END »»»

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

FRANÇAIS

3 HEURES

Valeur
proximative
en
ourcentage

4 1. *La Robe corail* (Anne Hébert)

> "Emilie pour la première fois fait la rencontre de son visage ... Et elle s'est aperçue qu'elle pleurait."

(*a*) Que veut dire ici "faire la rencontre de son visage"?

(*b*) En quelles circonstances Emilie fait-elle la rencontre de son visage?

(*c*) Pourquoi Emilie pleurait-elle?

(*d*) A quelle conclusion Anne Hébert veut-elle en venir?

4 2. *Rue Deschambault* (Gabrielle Roy)

***Ne répondez qu'à* (*a*) *ou à* (*b*).**

(*a*) "Et tout à coup j'ai crié avec angoisse: Rita! Rita! Rita! parce que, depuis une demi-minute peut-être, je n'avais pas entendu sa voix mêlée aux autres."

(i) Duquel des récits de Gabrielle Roy cette citation est-elle tirée?

(ii) Quel but poursuivaient Rita et les autres qui l'accompagnaient?

(iii) En cinq ou six lignes, racontez les difficultés de cette aventure.

ou

(*b*) "Mais ma tante en levant la tête dut apercevoir entre les lilas le dôme de mon chapeau rose. Son visage aussitôt se déplissa."

(i) Chez quels gens se trouvait alors l'enfant au chapeau rose?

(ii) Qu'est-ce qui l'avait incitée à se rendre chez ces gens?

(iii) Pourquoi sa tante l'avait-elle appelée "petite folle" le soir auparavant?

9 3. *On ne badine pas avec l'amour* (Alfred de Musset)

> "L'amour est un temple que bâtit celui qui aime à un objet plus ou moins digne de son culte, et ce qu'il y a de plus beau dans cela, ce n'est pas tant le dieu que l'autel."
>
> (George Sand dans une lettre à Alfred de Musset)

(*a*) En une dizaine de lignes, montrez que la scène de la salle à manger au deuxième acte donne raison à George Sand.

(*b*) Faites voir comment le rôle de Rosette illustre la théorie de Perdican sur l'amour.

TOURNEZ→

Valeur approximative en pourcentage

18

4. *Beaux Textes* (Marion)

(*a*) (EXTRAIT)

Je te chante, et tu peux m'accepter pour ton prêtre,
Toi qui viens dans la cuve où trempe un savon bleu,
Et tu choisis souvent, quand tu vas disparaître,
L'humble vitre d'une fenêtre
Pour lancer ton dernier adieu!

Tu fais tourner les tournesols du presbytère,
Luire le frère d'or que j'ai sur le clocher,
Et quand, par les tilleuls, tu viens avec mystère,
Tu fais bouger des ronds par terre
Si beaux qu'on n'ose plus marcher!

Tu changes en émail le vernis de la cruche;
Tu fais un étendard en séchant un torchon;
La meule a, grâce à toi, de l'or sur sa capuche,
Et sa petite sœur la ruche
A de l'or sur son capuchon!

(i) Quel est l'auteur du morceau d'où est tiré cet extrait[illegible]
(ii) A qui s'adresse ici l'auteur?
(iii) Quel est le prêtre dont parle ici l'auteur?
(iv) Citez un vers tiré de cet extrait pour justifier votre réponse à la question (iii).
(v) Quelle est l'idée générale développée dans ce morceau?
(vi) Mentionnez *quatre* détails tirés de la dernière strophe citée plus haut pour prouver votre réponse à la question (v).

(*b*) SE DÉVOUER

"Si vous tenez à connaître ce que vaut un homme, mettez-le à l'épreuve, et s'il ne vous rend pas le son du sacrifice, quelle que soit la pourpre qui le couvre, détournez la tête et passez, ce n'est pas un homme."

(i) De qui sont ces paroles?
(ii) Mentionnez *quatre* raisons apportées par Thomas Chapais pour prouver l'esprit de sacrifice de Mgr de Laval.

(*c*) LES DEUX INFINIS

"Car, enfin, qu'est-ce que l'homme dans la nature?"

(i) Quelle réponse Pascal donne-t-il à cette question?
(ii) Quelle doit être d'après Pascal l'attitude de l'homme devant le Créateur de l'univers?
(iii) A quelle forme particulière de pensée chrétienne peut-on rattacher les idées de Pascal?

15 5. *Iphigénie* (Racine)

(*a*) A la quatrième scène du quatrième acte, Iphigénie termine par ces paroles une longue tirade.

> "Une mère, un amant, attachaient leur bonheur.
> Un roi digne de vous a cru voir la journée
> Qui devait éclairer notre illustre hyménée;
> Déjà, sûr de mon cœur à sa flamme promis,
> Il s'estimait heureux; vous me l'aviez permis.
> Il sait votre dessein; jugez de ses alarmes.
> Ma mère est devant vous; et vous voyez ses larmes.
> Pardonnez aux efforts que je viens de tenter
> Pour prévenir les pleurs que je vais leur coûter."

(i) A quelle occasion Iphigénie prononce-t-elle ces paroles?

(ii) Précisez dans quel but elle fait ici allusion à Achille et à Clytemnestre.

(iii) Mentionnez *quatre* raisons apportées par Agamemnon à la suite des paroles d'Iphigénie pour justifier sa décision.

(iv) Voltaire a dit d'Iphigénie qu'elle est "le modèle de la noble simplicité". En une dizaine de lignes, appréciez ce jugement.

(*b*)

Ne répondez qu'à (i) *ou à* (ii)

(i) En quatre ou cinq lignes, établissez qu'*Iphigénie* est une tragédie royale.

ou

(ii) Les tragédies de Racine sont ordinairement basées sur un violent amour. En quatre ou cinq lignes, établissez s'il en est ainsi d'*Iphigénie.*

15 6. Appréciation littéraire

LE LEVER DU SOLEIL

Une belle soirée, on va se promener dans un lieu favorable, où l'horizon bien découvert laisse voir à plein le soleil couchant, et l'on observe les objets qui rendent reconnaissable le lieu de son coucher. Le lendemain, pour respirer le frais, on retourne au même lieu avant que le soleil se lève. On le voit s'annoncer de loin par les traits de feu qu'il lance au-devant de lui. L'incendie augmente, l'orient paraît tout en flammes: à leur éclat on attend l'astre longtemps avant qu'il se montre; à chaque instant on croit le voir paraître; on le voit enfin. Un point brillant part

—TOURNEZ→

comme un éclair et remplit aussitôt tout l'espace; le voile des ténèbres s'efface et tombe. L'homme reconnaît son séjour et le trouve embelli. La verdure a pris durant la nuit une vigueur nouvelle; le jour naissant qui l'éclaire, les premiers rayons qui la dorent, la montrent couverte d'un brillant réseau de rosée qui réfléchit à l'œil la lumière et les couleurs. Les oiseaux en chœur se réunissent et saluent de concert le Père de la vie; en ce moment, pas un seul ne se tait; leur gazouillement, faible encore, est plus lent et plus doux que dans le reste de la journée, ils se sentent de la langueur d'un paisible réveil. Le contour de tous ces objets porte aux sens une impression de fraîcheur qui semble pénétrer jusqu'à l'âme. Il y a là une demi-heure d'enchantement auquel nul homme ne résiste; un spectacle si grand, si beau, si délicieux, n'en laisse aucun de sang-froid.

—Jean-Jacques Rousseau

(*a*) Quels sont les signes précurseurs de ce spectacle?

(*b*) Par quels traits précis l'auteur peint-il
  (i) le moment où le soleil se lève?
  (ii) l'aspect de la verdure?
  (iii) le chant des oiseaux?

(*c*) Par quels mots donne-t-il une impression
  (i) de lumière?
  (ii) de fraîcheur?

(*d*) Indiquez *trois* qualités de cette description.

35 7. Rédaction

En vous inspirant des œuvres étudiées au cours de l'année, rédigez une trentaine de lignes sur l'*un* des sujets suivants. (150 à 200 mots)

(*a*) La bonté du Nègre de la rue Deschambault
(*b*) L'orgueil est le pire ennemi de l'amour
(*c*) Sacrifier Iphigénie, c'est commettre un meurtre politique
(*d*) L'Iphigénie moderne est la fille chrétienne

«« FIN »»

FRENCH

SECTION A - DICTATION

1967

Voici une aventure extraordinaire. Je voyageais l'année passée en province. On entrait en décembre. Les arbres qui bordaient la route fuyaient à mes côtés. Ils étaient horribles, noirs, la tête coupée, les bras tordus. Autrefois on avait trouvé un squelette dans le creux d'un de ces arbres. Je pensais à cela en arrivant à l'auberge. L'hôtesse a consenti à me préparer le souper. Pendant son absence j'ai vu distinctement au fond de la salle l'ombre de la jeune fille qui avait causé la mort de Claude Nozière, mon ancêtre.

Printed after the examination, for record purposes.

FRENCH
1967

PART III

TYPE A - SHORT ANECDOTES

1. première question: Depuis combien de temps M. Renaud est-il souffrant?

2. deuxième question: Qu'est-ce qui empêche M. Renaud de dormir?

3. troisième question: Quand M. Renaud doit-il prendre la poudre soporifique?

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FRENCH
PART III

1967

TYPE A—SHORT ANECDOTES

M. Renaud ne se sent pas bien depuis quelques semaines. Il est nerveux, n'a pas d'appétit et dort mal. Il se décide enfin à aller chez le médecin.

— Docteur, ça ne va pas, lui dit-il. Je suis devenu irritable et je ne mange plus de bon appétit. C'est probablement parce que je ne dors plus bien. Le moindre bruit me réveille. Toutes les nuits le chien du voisin me tient éveillé rien qu'en marchant autour de la maison.

— Ce n'est rien, déclare le médecin après un examen rapide. Voici une poudre soporifique qui va arranger cela.

— Merci bien, docteur. Dois-je la prendre avant ou après les repas?

— Cette poudre n'est pas pour vous! interrompt le médecin avec un geste énergique. Ce soir vous la donnerez au chien dans un peu d'eau.

Un étudiant entre dans un petit restaurant du Quartier Latin. Il s'assied et lit le menu qui est sur la table: bifteck, pommes de terre, salade, fromage et café.

— J'ai faim. Espérons que le bifteck sera tendre et assez gros! pense le jeune homme.

Hélas! Le bifteck que le garçon lui apporte est minuscule et plutôt dur.

— C'est chaque fois la même chose: les biftecks sont toujours petits et minces ici! Heureusement qu'il y a assez de pommes de terre! se dit l'étudiant en commençant à manger avec résignation. A la fin du déjeuner, le propriétaire s'approche de lui.

— J'ose croire que vous avez bien mangé, monsieur, demande-t-il avec sollicitude. Comment avez-vous trouvé le bifteck?

— Je l'ai trouvé en soulevant une pomme de terre! lui répond ironiquement l'étudiant.

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FRENCH

1967

PART III

TYPE B - SHORT QUESTIONS

7. première question: Que portent les dames qui assistent à un dîner de cérémonie?

8. deuxième question: Quand est-ce que la plupart des gens prennent le petit déjeuner?

9. troisième question: Où la victime d'un vol porte-t-elle plainte?

10. quatrième question: Qu'est-ce qu'on appelle le centième anniversaire d'un événement mémorable?

11. cinquième question: Que fait-on après avoir fini de manger?

12. sixième question: Quel sentiment les parents éprouvent-ils d'habitude quand les enfants ne rentrent pas à l'heure.

13. septième question: De quoi se sert-on pour couper l'herbe de la pelouse?

Printed after the examination, for record purposes.

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

FRENCH

3 HOURS

The three Parts of the examination will be given to you as follows:

1. At 9.00 a.m., Part I.
2. At 9.00 a.m., Part II, an apricot-coloured folder containing objective test items. (Allow about 30 minutes at any time between 9.00 and 11.30 for answering this Part.)
3. Just before 11.30 a.m., Part III, a pink-coloured sheet. (Use this sheet for answering the Listening Comprehension Test to be given following the Dictation Test.)

PART I

Write all answers on alternate lines.

Section A

(*approximately 7% of the total*)

DICTATION TEST (to be given at 11.30 a.m.)

Leave the first two *lined* pages of your first examination book blank for the Dictation Test.

Section B

(*approximately 3% of the total*)

Traduisez *en français* les mots anglais entre parenthèses. Ne copiez pas les phrases.

1. Il parle (constantly) de son entrevue avec le ministre.
2. Autrefois en Russie on buvait le thé (out of) un verre.
3. Il ne m'a pas remercié de mon cadeau, (which) m'a beaucoup choqué.
4. (Anyone) peut vous dire où se trouve la mairie.
5. Elle s'étonne que je (am) si sûr de gagner le prix.

TOURNEZ→

6. On prétend que le mont Everest est la plus haute montagne (in the) monde.

7. Je lui ai dit que s'il (came home) chez lui avant cinq heures, il m'y trouverait toujours.

8. Quoique ces pommes soient magnifiques, je n'en achèterai pas (more than) cinq ou six.

9. J'ai perdu mon portefeuille et il m'a fallu emprunter dix dollars (from) ma mère.

10. Quand même il (were to read) la lettre, il ne la comprendrait pas.

Section C

(*approximately 24% of the total*)

Traduisez *en français. N'employez pas* le passé défini (le passé simple) dans ces phrases.

1. Every time Peter thought about his sins he was embarrassed. He had none he could remember; so he had to invent a few.

2. Suddenly a wonderful idea came to him. He would steal Fontanet's cap so that the priest would have something to forgive him for. He could return it to him afterward.

3. Madame Gance suspected the boy's feelings. He never said anything to her, but his eyes, filled with admiration, showed clearly that he was very much interested in her.

4. I am delighted that you have finally heard from them. I doubted that we could count on them to write often, but I certainly wasn't expecting such a long silence.

5. The Martins are now in Rome. They plan on leaving that beautiful place in two months time. Send them a telegram tomorrow wishing them a happy stay abroad.

6. The longer they are away the more I miss them. I may be wrong but sometimes I think they are the only friends I have in the whole school.

7. The best way to save money is to put a little away every week. Little by little you pile up what you need and you save yourself any serious difficulties.

8. As for sewing, she is an expert. If you want a new dress, I'll have her make it. She will do it for you gladly, and moreover cheaply.

Section D

(*approximately 19% of the total, 4 of which will be for style*)

LE LIVRE DE MON AMI

Répondez *en français*, par des phrases complètes, à *quatre* des questions suivantes.

N. B. 1. *Quatre questions seulement*
2. *Une cinquantaine de mots pour chaque réponse*

1. Mentionnez *deux* ambitions de l'enfant Pierre. Pourquoi a-t-il renoncé à ces deux ambitions?

2. Quelle ironie trouvez-vous dans la suppression de l'abbé Jubal et dans la nomination de Fontanet comme sous-secrétaire d'Etat?

3. Qu'est-ce que nous apprenons de la vie de la dame en blanc à travers les souvenirs de Pierre?

4. Pourquoi, la nuit dans son lit à galerie, Pierre ne voulait-il pas fermer l'œil? Qu'est-ce qui l'a aidé plus tard à comprendre sa répugnance?

5. Contrastez Alphonse et Pierre.

6. Décrivez la visite chez M. Robin et montrez ce qu'elle nous apprend sur le petit Pierre.

7. Expliquez la brouille entre la mère et la marraine de Pierre, puis leur raccommodement.

8. Comparez l'éducation que Pierre a reçue dans la classe de M. Chotard à celle qu'il a reçue dans les rues de Paris.

Section E

(*approximately 14% of the total, 7 of which will be for style*)

Rédigez *en français* une composition d'environ 150 mots sur *l'un* des sujets suivants.

1. La pension de Mlle Lefort
2. Les deux visites domiciliaires chez Mme Danger
3. La vie familiale chez les Nozière

TOURNEZ →

Section F

(*approximately 11% of the total*)

Lisez le paragraphe ci-dessous et répondez brièvement *en français* aux questions qui le suivent.

— Sacrebleu! s'écria-t-il, vous vous êtes mis dans de jolis draps, monsieur Bonnard!

Puis, remarquant Jeanne qui tournait de lui à moi ses grands yeux effarés:

— Venez donc, me dit-il.

Je le suivis dans son cabinet où brillaient à la lueur des lampes, sur la tenture sombre, des carabines et des couteaux de chasse. Là, m'entraînant sur un canapé de cuir:

— Qu'avez-vous fait! me dit-il. Détournement de mineure, enlèvement! Vous vous êtes mis une belle affaire sur les bras. Vous êtes tout bonnement sous le coup de cinq à dix ans de prison.

— Miséricorde! m'écriai-je; dix ans de prison pour avoir sauvé une innocente enfant!

— C'est la loi! répondit M. de Gabry. Je connais assez bien le code, mon cher monsieur Bonnard, parce que j'ai fait mon droit. Mouche est un coquin, la Préfère est une drôlesse, et vous ... je ne trouve pas de mot assez fort.

1. Remplacez *chacune* de SIX des expressions suivantes par *un seul mot* que vous trouverez dans le passage.

(*a*) femme méprisable
(*b*) effrayés
(*c*) fusil court et léger
(*d*) long siège à dossier
(*e*) recueil de lois
(*f*) lumière faible
(*g*) homme sans honneur
(*h*) peau épaisse de certains animaux

2. Répondez *en français* par des phrases complètes aux questions suivantes.

(*a*) Quelle est la profession de monsieur de Gabry?

(*b*) Comment monsieur Bonnard s'était-il exposé à l'incarcération?

(*c*) Pourquoi monsieur Bonnard trouve-t-il difficile de se croire coupable?

(*d*) Quelle émotion Jeanne a-t-elle ressentie en écoutant les deux hommes?

(*e*) Qu'est-ce qu'il y a dans ce passage qui rappelle LE LIVRE DE MON AMI? (*deux* points)

THE END OF PART I

FRENCH

1967

PART II

(*approximately 15% of the total*)

NOTE 1. *You are advised to allow approximately 30 minutes for Part II.*

NOTE 2. *All items in Part II are of equal value.*

NOTE 3. *Only those answers which are indicated in the answer column at the right will be marked.*

— — — —

From each of the following groups of words, select the word which best suits the definition given, and circle its *letter* in the answer column at the right.

1. Déclaration contraire à la vérité
(A) histoire (C) vérification (E) contradiction
(B) mensonge (D) déclamation

1.
A B C D E

2. Organe du sens de l'ouïe
(A) sentiment (C) organisation (E) oreille
(B) oreiller (D) ouï-dire

2.
A B C D E

3. Groupe de personnes choisies pour examiner certaines affaires
(A) communauté (C) personnages (E) troupe
(B) compagnie (D) comité

3.
A B C D E

4. Chagrin que l'on ressent du bonheur d'autrui
(A) affliction (C) haine (E) malheur
(B) envie (D) mélancolie

4.
A B C D E

5. Images qui se présentent à l'esprit pendant le sommeil
(A) rêves (C) spiritisme (E) spiritualisme
(B) sommes (D) imagination

5.
A B C D E

6. Lame de verre poli dont on fait des vitrines
(A) ver (C) vitrail (E) réflexion
(B) vague (D) glace

6.
A B C D E

Select the word or expression which most suitably completes each of the following sentences, and circle its *letter* in the answer column at the right.

7. Mon frère est trop grand . . . porter mes habits.
(A) de (C) à (E) plus
(B) pour (D) jamais

7.
A B C D E

8. Avez-vous remarqué la voiture devant la porte? . . . est à moi.
(A) Il (C) Cela (E) On
(B) Elle (D) Celle

8.
A B C D E

9. Elle a pris le crayon . . . la table.
(A) sur (C) de (E) en
(B) dans (D) à

9.
A B C D E

10. Jean n'est pas . . . brave que son cousin.
(A) autant (C) tellement (E) tant
(B) assez (D) si

10.
A B C D E

TOURNEZ→

11. A moins qu'il ne . . . bien m'aider, je renoncerai à cette entreprise.
(A) voudra (C) veut (E) voulait
(B) veuille (D) voulût

12. Il était difficile . . . comprendre la question.
(A) pour moi (C) de (E) pour
(B) pouvoir (D) à

13. Il n'est pas venu à la soirée; il . . . être malade.
(A) devra (C) avait dû (E) doive
(B) faut (D) a dû

14. Il y avait dans les lettres . . . faire guillotiner la femme.
(A) de quoi (C) assez de (E) assez
(B) desquelles (D) de que

15. Elle triait des papiers qui étaient . . . sur le secrétaire.
(A) ramassé (C) empilées (E) tasser
(B) répandus (D) classé

16. Il a fait . . . fautes qu'il lui faudra refaire le devoir.
(A) bien des (C) trop de (E) beaucoup de
(B) autant de (D) tant de

17. Il m'a fait promettre de . . . dire avant son retour.
(A) ne pas (C) ne rien (E) ne plus
(B) ne que (D) ne point

18. Quelle réponse a-t-il . . . à la question?
(A) posée (C) répondue (E) donnée
(B) demandé (D) reçu

19. Dès qu'il . . . de retour, nous nous mettrons à table.
(A) sera (C) rentrera (E) était
(B) retournera (D) est

20. Pouvez-vous me donner son . . . de téléphone
(A) nombre (C) chiffre (E) standard
(B) numéro (D) nombreux

21. Ces beaux gants coûtent deux mille francs . . . paire.
(A) pour une (C) chacune (E) la
(B) chaque (D) le

22. . . . homme mérite le mépris de tous.
(A) Tel un (C) Tel (E) Tel et tel
(B) De tel (D) Un tel

23. Il nous a demandé d'attendre . . . il soit prêt.
(A) jusqu' (C) jusqu'à (E) qu'
(B) de crainte qu' (D) avant qu'

24. Comparons votre voiture à . . . que je viens d'acheter.
(A) l'une (C) cette (E) celui
(B) celle (D) l'un

11.
A B C D E

12.
A B C D E

13.
A B C D E

14.
A B C D E

15.
A B C D E

16.
A B C D E

17.
A B C D E

18.
A B C D E

19.
A B C D E

20.
A B C D E

21.
A B C D E

22.
A B C D E

23.
A B C D E

24.
A B C D E

25. Ma sœur est née . . . décembre.
(A) le premier
(B) le premier de
(C) l'un de
(D) le trente et unième
(E) le trente et unième de

25. A B C D E

26. L'ouvrier pressera sur le bouton après . . . le signal.
(A) ayant reçu
(B) recevoir
(C) de recevoir
(D) avoir reçu
(E) recevant

26. A B C D E

27. . . . vous fassiez vous ne réussirez pas.
(A) N'importe quoi
(B) Malgré
(C) Quoi que
(D) A moins que
(E) Quoique

27. A B C D E

28. Il n'y a rien qui . . . lui plaire maintenant.
(A) peut
(B) pourra
(C) doit
(D) pouvait
(E) puisse

28. A B C D E

From each of the groups below, select the word which most nearly CORRESPONDS in meaning to the italicized word in the sentence, and circle its *letter* in the answer column at the right.

29. Je sentais mon cœur *se gonfler* si fort que je croyais mourir.
(A) se distendre
(B) se contracter
(C) se gorger
(D) se lamenter
(E) s'écrier

29. A B C D E

30. Sa mort a plongé la nation entière dans *le deuil.*
(A) l'anarchie
(B) l'ivresse
(C) la misère
(D) la douleur
(E) les funérailles

30. A B C D E

31. J'ai fait *le vœu* de cesser de lui parler.
(A) la volonté
(B) la décision
(C) le serment
(D) la taciturnité
(E) la voix

31. A B C D E

32. Je réfléchissais pendant quelques instants avec *lucidité.*
(A) clarté
(B) clarification
(C) lutte
(D) lumière
(E) lueur

32. A B C D E

33. La fourmi n'est pas *prêteuse.*
(A) pressée
(B) généreuse
(C) économe
(D) prête
(E) prétentieuse

33. A B C D E

After each of the following incomplete statements are five suggested completions. In each case select the one which provides the most suitable completion, and circle its *letter* in the answer column at the right.

34. Pour apaiser sa soif mon oncle a demandé . . . .
(A) de la soie
(B) du soin
(C) une consommation
(D) un appétit
(E) un hors-d'œuvre

34. A B C D E

35. L'histoire est un récit des événements . . . .
(A) du temps écoulé
(B) de notre vie
(C) de l'avenir
(D) de l'éternité
(E) de nos aventures

35. A B C D E

36. Le moine vit loin du monde pour mieux . . . .
(A) se cacher
(B) cultiver son jardin
(C) adorer Dieu
(D) écrire ses souvenirs
(E) dormir

36. A B C D E

TOURNEZ →

From each of the following groups, select the word which contains the SAME SOUND as the italicized part of the given word, and circle its *letter* in the answer column at the right.

37. cr*u* [y]
(A) humble (C) guère (E) bruit
(B) gueux (D) culotte

37. A B C D E

38. b*o*nheur [ɔ]
(A) bonté (C) beau (E) monsieur
(B) bout (D) bordure

38. A B C D E

39. bl*anc* [ɑ̃]
(A) anneau (C) amener (E) moyen
(B) emmener (D) damner

39. A B C D E

From each of the following groups, select the word that has a SILENT CONSONANT, and circle its *letter* in the answer column at the right.

40.
(A) correct (C) net (E) aspect
(B) exact (D) reste

40. A B C D E

41.
(A) neuf (C) banc (E) jadis
(B) bec (D) parc

41. A B C D E

From each of the groups below, select the word which is the most nearly OPPOSITE in meaning to the italicized word in the sentence, and circle its *letter* in the answer column at the right.

42. Ses observations étaient des plus *injurieuses*.
(A) flatteuses (C) blessantes (E) insultantes
(B) opportunes (D) insolantes

42. A B C D E

43. Hier soir j'ai vu un film qui m'a beaucoup *ennuyé*.
(A) instruit (C) diverti (E) touché
(B) fatigué (D) peiné

43. A B C D E

44. Je me suis étonné de la grande *richesse* qui se voyait partout.
(A) pauvreté (C) moralité (E) propreté
(B) luxure (D) bassesse

44. A B C D E

45. Inutile de *défendre* cela; on ne vous écoutera pas!
(A) refuser (C) excuser (E) permettre
(B) protéger (D) empêcher

45. A B C D E

THE END OF PART II

FRENCH

1967

PART III

(*approximately 7% of the total*)

LISTENING COMPREHENSION

General instructions:

This is a further test of your ability to understand spoken French. You have no writing to do but you will indicate that you have understood what you have heard by choosing the correct answer from among those suggested for each question. There are three distinct types or sub-tests on the record and the precise instructions for each type are printed in French on your answer sheet, so that you can follow them as they are being read. Only one answer is correct for each item.

TYPE A — SHORT ANECDOTES

Je vais lire une petite anecdote et je vais vous poser des questions. Puis je vais relire l'anecdote et poser une seconde fois chaque question. Choisissez pour chaque question la bonne réponse et encerclez à droite la lettre correspondante.

1. première question:

(A) depuis deux ou trois années
(B) depuis la veille
(C) depuis la semaine passée
(D) depuis quelques semaines

1. A B C D

2. deuxième question:

(A) une indigestion persistante
(B) le chien du voisin
(C) sa femme qui ronfle
(D) ses dettes qui l'inquiètent

2. A B C D

3. troisième question:

(A) après les repas
(B) le soir en se couchant
(C) jamais! — la poudre n'est pas pour lui
(D) le matin en se réveillant

3. A B C D

Je vais lire *deux fois* une autre anecdote. Vous trouverez sur votre feuille trois phrases incomplètes. Choisissez la bonne expression pour compléter la phrase et encerclez à droite la lettre correspondante.

4. première phrase: L'étudiant exprime l'espoir . . . .

(A) qu'on le servira bientôt
(B) que le déjeuner sera bon marché
(C) que la serveuse sera jolie
(D) que le bifteck sera gros

4. A B C D

5. deuxième phrase: L'étudiant s'est résigné . . . .

(A) parce qu'il aura assez à manger
(B) parce que les biftecks sont toujours durs ici
(C) parce qu'il n'avait plus faim
(D) parce qu'on lui avait donné une seconde tasse de café

5. A B C D

6. troisième phrase: L'étudiant répond à la question du propriétaire . . . .

(A) avec politesse
(B) avec ironie
(C) avec résignation
(D) avec colère

6. A B C D

TOURNEZ →

TYPE B — SHORT QUESTIONS

Maintenant je vais vous poser sept questions. Je lirai deux fois chaque question. Vous trouverez sur votre feuille quatre réponses à chaque question. Choisissez la bonne réponse et encerclez à droite la lettre correspondante.

7. première question:
   - (A) un chandail
   - (B) une toilette de soirée
   - (C) une robe de plage
   - (D) une robe de chambre

8. deuxième question:
   - (A) le soir
   - (B) à minuit
   - (C) le matin
   - (D) à midi

9. troisième question:
   - (A) à l'hôpital
   - (B) au poste de police
   - (C) à l'université
   - (D) à l'aéroport

10. quatrième question:
    - (A) le centime
    - (B) une centaine
    - (C) le centenaire
    - (D) le centimètre

11. cinquième question:
    - (A) on prend le potage
    - (B) on se lève de table
    - (C) on se met à table
    - (D) on met le couvert

12. sixième question:
    - (A) un sentiment de fierté
    - (B) un moment de joie
    - (C) de l'inquiétude
    - (D) le regret de leur jeunesse

13. septième question:
    - (A) d'une tondeuse
    - (B) d'un rasoir
    - (C) d'un canif
    - (D) d'un couteau

7. A B C D

8. A B C D

9. A B C D

10. A B C D

11. A B C D

12. A B C [illegible]

13. A B C D

««« THE END »»»

1867 1967

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

GERMAN

3 HOURS

NOTE. *Write on alternate lines throughout the paper. Write all numbers and dates in the sentences in words.*

Approximate Percentage Values

A

Beantworten Sie *zwei* von den folgenden drei Fragen!

3 1. Von den auswendig gelernten Gedichten schreiben Sie Eichendorffs „Mondnacht“!

3 2. Beantworten Sie *auf deutsch* in ganzen Sätzen folgende Fragen über Brechts „Legende“!

   (*a*) Warum ist Laotse „auf dem Weg in die Emigration“?
   (*b*) Was ist die Lehre des Laotse über das weiche Wasser und den harten Stein?

3 3. Beantworten Sie *auf deutsch* in ganzen Sätzen folgende Fragen über Heines „Belsatzar“!

   (*a*) Was ist die zentrale Idee dieses Gedichts? (Geben Sie jedoch nicht den Inhalt des Gedichts wieder!)
   (*b*) Warum wurde der König von Babylon von seinen Knechten umgebracht?

B

Schreiben Sie *auf deutsch* über *eines* der untenstehenden Themen in einem kurzen Aufsatz von sechzig bis achtzig Worten, doch nicht mehr als achtzig Worten!

5 1. Detlev von Liliencrons „Siegesfest“: Der Dichter schafft eine doppelte Stimmung (mood) in diesem Gedicht. Beschreiben Sie diese Stimmungen! Welches ist die überwiegende?

2. Schillers „Das Mädchen aus der Fremde“: Erklären Sie Schillers Meinung, wenn er in diesem Gedicht schreibt:

> „Beseligend war ihre Nähe,
> Und alle Herzen wurden weit,
> Doch eine Würde, eine Höhe
> Entfernte die Vertraulichkeit.“

CONTINUED OVER→

Approximate Percentage Values

C

(*a*) Beantworten Sie *auf deutsch* mit ein paar kurzen Sätzen folgende Fragen!

5×1

1. „Undines Gewaltiger Vater": Warum wird Agrippina von Böll „ein rheinisches Mädchen" genannt? (Schreiben Sie nicht von der Entstehung des Namens der Stadt Köln!)
2. „Die Postkarte": Welche Änderung im Leben Bruno Schneiders verursachte die Postkarte mit dem Einschreibe-Etikett?
3. „Damals in Odessa": Warum mussten die drei Soldaten in Odessa warten? Wohin wurden sie nachher geschickt?
4. Wogegen protestiert der Mann mit dem teuren Bein? Warum will er nicht als Schuhputzer arbeiten?
5. Was ist der ungewöhnliche Auftrag, den Dr. Murke von dem Intendanten des Funkhauses bekommt?

2×6 (*b*) Schreiben Sie *auf deutsch* über *zwei* der untenstehenden Themen, indem Sie kurze Aufsätze von achtzig bis neunzig Worten (nicht mehr als neunzig Worte für jedes Thema) verfassen!

N.B. Schreiben Sie nur über *zwei* Themen!

1. Die Armut und schwere Arbeit der Leute von Bilgan
2. Der kritische Zweck des Dichters in „Doktor Murkes gesammeltes Schweigen"
3. Eine Skizze des Charakters Bur-Malottkes
4. Das Funkhaus: wie es funktioniert

D

11 Schreiben Sie einen *deutschen* Aufsatz von hundertzwanzig bis hundertfünfzig Worten über *eines* der folgenden Themen! (nicht mehr als hundertfünfzig Worte)

1. Das tapfere Herz des Grossvaters in „Die Wage der Baleks"
2. Der Konflikt zwischen den Baleks und den Leuten von Bilgan
3. Humorvolle Vorfälle in „Doktor Murkes gesammeltes Schweigen"

E

1 1. Schreiben Sie sinnverwandte deutsche Wörter oder Ausdrücke für *vier* der folgenden!

(*a*) Ferien (*b*) herrlich (*c*) verehren (*d*) bedeutend (*e*) erwidern

1 2. Unterstreichen Sie die hauptbetonte Silbe (z.B. Genuss)!

(*a*) Professor (*b*) Frühjahr (*c*) Nachmittag (*d*) warum

2 3. Machen Sie die folgenden Sätze abhängig von *Er sagte, dass*!

(*a*) Sie war im Haus.

(*b*) Er liess sich einen neuen Anzug machen.

2 4. Machen Sie die folgenden Sätze abhängig von *Er fragte*!

(*a*) Haben die Knaben es noch nicht gefunden?

(*b*) Warum darf das Mädchen Donnerstag frei haben?

Approximate Percentage Values

F

Übersetzen Sie ins Deutsche!

4 1. I stood up and looked out of the window just soon enough to see him go by on his bicycle. Driving very fast, he did not notice the stone on the road.

4 2. The charming young lady looked at herself in the mirror which hung on the wall near the door. She put her gloves on carefully and would have left the room if the door bell had not rung.

4 3. The father said to his son that he ought to have set out long ago, since it was ten past one and the bus would be arriving within twenty minutes.

4 4. Gebrauchen Sie das Passiv in diesem Satze! His works have been translated into many foreign languages; they are read and taught in hundreds of schools and his books can be bought cheaply.

16 5. I had come out of the station and was walking along William Street when it suddenly occurred to me that I was without a hat. I stopped and put down my suitcase on the ground. I reflected for a moment. I remembered that I was wearing it on my head when I got into the train in Cologne. Yes, I had hung my hat in the compartment, that was certain, and on getting out I had completely forgotten it. What was I to do? The train had probably gone again and was carrying my hat off to Berlin. I had paid twelve marks for it only a few days before. No, I must go back and inquire about it, I said to myself.

G

Ohne zu übersetzen, beantworten Sie *auf deutsch* in vollständigen Sätzen die untenstehenden Fragen!

Da ist der Mann, der den Motor seines Bootes, kurz bevor er landen wollte, nicht mehr abstellen konnte. Er dachte zunächst, das sei weiter kein Unglück und zum Glück sei der See gross, machte kehrt und fuhr vom Ostufer gegen das Westufer zurück, wo die Berge steil aufsteigen und die grossen Hotels stehen. Es war ein schöner Abend, und seine Kinder winkten ihm vom Landungssteg, aber er konnte den Motor noch immer nicht abstellen, tat auch, als wollte er nicht landen, und fuhr wieder gegen das flache Ufer zurück. Hier — zwischen entfernten Segelbooten, Ufern und Schwänen — brach ihm zum erstenmal der Schweiss aus den Poren, denn er konnte seinen Motor noch immer nicht abstellen. Er rief seinen Freunden, die auf der Terrasse des Gasthofes beim Kaffee sassen, fröhlich zu, er wolle noch ein wenig weiterfahren, und sie riefen fröhlich zurück, das solle er nur. Als er zum drittenmal kam, rief er, er wolle nur seine Kinder holen, und seinen Kindern rief er zu, er wolle nur seine Freunde holen. Bald darauf waren Freunde und Kinder von beiden Ufern verschwunden, und als er zum viertenmal kam, rief er nichts mehr.

CONTINUED OVER

Approximate Percentage Values

Er hatte entdeckt, dass sein Benzintank leck war, das Benzin war längst ausgelaufen, aber das Seewasser trieb seinen Motor weiter.

N.B. *Auf deutsch zu beantworten*!

1 1. Was erfuhr der Mann, als er zum Landungssteg fahren wollte?
2 2. Wie dachte der Mann, sich zunächst aus der Lage zu retten?
3 3. Wie versuchte der Mann, als er zum zweitenmal hin und zurück fuhr, seine Lage den Kindern und Freunden zu verbergen?
2 4. Was rief er den Freunden und den Kindern zu, als er zum drittenmal kam?
2 5. Warum konnte der Mann immer noch nicht ans Land fahren?

H

Read the following passage and answer *in English* the questions below.

Im Sommer ist Neuyork ja unerträglich, keine Frage, und wer es irgendwie kann, fährt hinaus, sobald er frei ist. Hunderttausende von Wagen rollen am Sonntag beispielsweise über die Washington Bridge hinaus, drei nebeneinander, eine Armee von Städtern, die dringend die Natur suchen. Dabei ist die Natur zu beiden Seiten schon lange da; Seen ziehen vorbei, Wälde mit grünem Unterholz, Wälder, die nicht gekämmt sind, sondern wuchern, und dann wieder offene Felder ohne ein einziges Haus, eine Augenweide, ja, es ist genau das Paradies; nur eben: man fährt vorbei. In diesem fliessenden Band von glitzernden Wagen, die alle das verordnete Tempo von vierzig oder sechzig Meilen halten, kann man ja nicht einfach stoppen, um an einem Fichtenzapfen zu riechen. Nur wer eine Panne hat, darf in den seitlichen Rasen ausrollen.

Gegen vier Uhr nachmittags fängt es wieder an, das gleiche Rollen wie am Morgen, nur in der anderen Richtung. Es ist heiss, man wartet und versucht, sich um eine Wagenlänge vorzuzwängeln; dann geht es wieder, Schrittfahren, dann wieder offene Fahrt, dann wieder Stockung. Man sieht eine Schlange von etwa fünfhundert Wagen. Helikopter kreisen über der Gegend, lassen sich über den stockenden Kolonnen herunter, um durch Lautsprecher zu melden, welche Strassen weniger verstopft sind.

N.B. *To be answered in complete English sentences.*

1 1. Wohin wollen die vielen Reisenden, die aus der Groszstadt fahren?
2 2. Wie sieht die Landschaft aus, an der sie vorbeifahren? (*vier* Punkte)
2 3. Warum können die Autofahrer nicht anhalten?
2 4. Beschreiben Sie das Tempo der Autos am Nachmittag.
1 5. Was ist die einzige Rettung aus diesem Verkehr?
2 6. Welches sind die Gedanken des Dichters über so eine Naturfahrt, die in diesem Abschnitt ersichtlich werden?

«««THE END»»»

1867 1967

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

RUSSIAN

3 HOURS

NOTE. *Write answers on alternate lines throughout the paper. Write all numbers in words.*

Approximate Percentage Values

SECTION A

5 Translate into Russian in the correct form the English words in parentheses in *each* of the following sentences. (*Do not copy the rest of the sentence.*)

1. Ты работаешь вечерами (at home).
2. У меня нет (time).
3. Через неделю (his grandmother) будет сто лет.
4. Суп едят (with a spoon).
5. На (snow) сидела птичка.
6. (One must not) курить в кино.
7. Вера замужем за (Englishman).
8. Школа (starts) в сентябре.
9. (Editors) нужны будут эти статьи.
10. (In mother's presence) она всегда молчит.
11. Ребята, не (take) этого журнала!
12. Таня не знает, (whether he knows how) танцевать.
13. Теперь (1967) год.
14. На этом собрании было около (400) человек.
15. Мы вчера встретились (at half-past five).

SECTION B

9 (*a*) Replace any *six* of the Russian adjectives or adverbs in parentheses in the following sentences with the correct form of the *simple* comparative or of the *simple* superlative according to the meaning of the sentence. (*Do not copy the rest of the sentence.*)

1. Синяя юбка (короткая) чёрной.
2. Сегодня холодно, но говорят, что завтра будет (холодно).
3. Мне (легко) читать по-испански, чем говорить.
4. Ваш дом (высокий) нашего.
5. Её дедушка (умный) человек.
6. Он (сильный) других мальчиков.
7. Пушкин (великий) русский поэт.
8. Мясо дёшево, а рыба ещё (дешёвая).

CONTINUED OVER

(*b*) Replace any *six* of the Russian words in parentheses in the following sentences with the appropriate Russian form of the adjectival or adverbial participle. (*Do not copy the rest of the sentence.*)

1. Девочка, (любить) всеми, сейчас больна.
2. Словарь, (взять) в библиотеке, лежит на столе.
3. Футболист, (играть) в нашей команде в сентябре прошлого года, поступает в университет.
4. (Жить) в Монреале, он часто заходил к нам.
5. Она его слушала, (улыбаться).
6. (Окончить) задачу, я пойду играть в хоккей.
7. Я ему передал роман, (написать) известным писателем.
8. (Написать) письмо, я отнёс его на почту.

(*c*) In *each* of the following sentences, choose the appropriate verb and write it in the correct form of the tense required. (*Do not copy the rest of the sentence.*)

(i) Present tense
  1. Мальчик (рисовать, нарисовать) зверей.
  2. Вы (готовиться, приготовиться) к экзаменам.
  3. Ты (искать, поискать) адрес приятеля?

(ii) Past tense
  1. Моя двоюродная сестра часто (ложиться, лечь) на диван и отдыхала.
  2. Вчера он (получать, получить) письмо от друга.
  3. По понедельникам они (ужинать, поужинать) с нами.

SECTION C

30 Translate into Russian.

1. Ivan often goes abroad and last year he invited me to go with him. We left Toronto on the first of July at eleven p.m. and arrived in France early in the morning. We were there only one week and later we decided to visit Russia.

2. On the train I made the acquaintance of many young people. My elder brother was able to understand Frenchmen better than I. It was difficult to answer their questions.

3. The majority of Russian towns and villages are similar to ours. Their large buildings with offices, stores and restaurants are situated on the main streets. We saw children playing in the parks.

4. We stayed at our uncle's. He lives in an apartment on the twenty-third floor. He moved there seven years ago.

5. In the morning we would eat bread and drink a glass of cold milk. After breakfast my brother and I used to swim every day in the lake. In the afternoon we used to read books because we were interested in Soviet literature.

6. Suddenly he glanced at me and said quietly: "Misha, what would you do if I lost the tickets which we bought in Canada?" I answered him: "Don't be afraid; we have rich relatives here who will give us the money because they will want us to return home."

Approximate Percentage Values

SECTION D

15 Write in Russian a composition of 120 to 150 words on *one* of the following topics.

1. Опишите жизнь Лизы в романе „Пиковая дама”.
2. Опишите молодежь в Канаде.
3. Опишите помещика Чубукова и его соседа Ломова.

SECTION E

28 Section E is to be answered in *Russian* in complete sentences. Each answer should be about 25 words.

(*a*) МЕДВЕДЬ

Answer any *three* of the following questions.

1. Что говорил Лука о своей жене и что он советовал помещице?
2. Что рассказывала Елена Ивановна о покойном муже?
3. Какого мнения был Григорий Степанович о женщинах сперва?
4. Почему вдруг Смирнову понравилась Попова?

(*b*) ПРЕДЛОЖЕНИЕ

Answer any *three* of the following questions.

1. Опишите Наталью Степановну?
2. Какие были главные причины споров между соседями?
3. Почему Наталья Степановна попросила вернуть Ломова после того, как он обидел Чубуковых и ушёл?
4. Как кончается эта пьеса?

(*c*) ЮБИЛЕЙ

Answer any *three* of the following questions.

1. Что говорил Шипучин о себе?
2. Что рассказывала Татьяна Алексеевна мужу о своей поездке?
3. Почему решила Мерчуткина обратиться за помощью к господину Шипучину?
4. Опишите сцену в банке, когда вошла депутация из пяти человек?

(*d*) ПИКОВАЯ ДАМА

Answer any *five* of the following questions.

1. Что рассказывал Томский о жизни своей бабушки в Париже?
2. Опишите характер Германна?
3. Какой был характер у старой графини?
4. Опишите сцену, которая произошла между графиней и Германном в её уборной?
5. Как подействовала на Германна тайна графини?
6. Опишите игру между Германном и Чекалинским?
7. Почему Германн сошёл с ума?

SECTION F

13 Read the following passage. Then, using the information it contains, answer the questions which follow the passage.

Я уже немолодой парень и жил тихой жизнью. Вот только меня беспокоила бессонница.

Ночью я иногда никак не мог уснуть, переворачивался с боку на бок, покашливал. И при этом мой диван издавал жалобные звуки.

CONTINUED OVER

Вот так я и жил... Но недавно у меня появился новый сосед. Тут-то всё и началось!

Через несколько дней ко мне постучали в дверь. „Наверное, визит вежливости”, — подумал я. Но ошибся. Ко мне пришёл отец моего нового соседа. Гость внимательно осмотрел всё, вошёл в мою спальню и сказал:

— Диван надо переставить к другой стене.

Я удивился. Мой гость объяснил мне:

— Ночью вы спите беспокойно, часто переворачиваетесь, храпите (snore), кашляете, а иногда разговариваете во сне. Мой сын спит около этой стены и всё время жалуется, что вы мешаете ему спать. А моему сыну нужен полный покой: он чемпион бокса и готовится сейчас к Олимпийским играм. Из-за вас он не может даже выспаться нормально.

И ещё добавил:

— Я в 1935 году тоже был чемпионом бокса, да и теперь нахожусь в неплохой спортивной форме.

Я посмотрел на его широкие плечи, могучую фигуру и не стал возражать. Мы вместе переставили диван на новое место.

На этом дело не кончилось. Через два дня он снова явился ко мне.

— Что у вас бывает на ужин?

— Мясо, картофель или макароны.

— Я так и знал, — неодобрительно покачал он головой. — Вот почему ваше храпение продолжает беспокоить моего сына. Вам, пожилому человеку, нужно кушать на ночь что-нибудь полегче. Предлагаю такое меню: молоко, яйцо, фрукты.

На следующий день он пришёл снова и радостно сказал:

— Прекрасно! Вы вели себя этой ночью хорошо! Мой сын проспал целую ночь. Продолжайте в том же духе! Ни грамма алкоголя, не курите! Табак — это яд. Перед сном гуляйте.

Я не спорил и делал всё так, как мне говорили.

И с каждым днём я чувствовал себя всё лучше и лучше. Я даже стал заниматься спортом и посещать тренировки по боксу. Так благодаря моему беспокойному соседу я стал спортсменом.

(*a*) Answer in ***Russian*** in complete sentences the following questions.

1. Почему отец соседа просил переставить диван на другое место?
2. Почему сыну соседа нужен был отдых?
3. Как выглядел отец соседа? (*two* things)
4. Что отец говорил автору есть на ужин? (*two* things)
5. Чем начал заниматься автор? (*two* things)

(*b*) Answer in ***English*** in complete sentences the following questions.

1. Что беспокоило автора всю его жизнь?
2. По мнению отца соседа, почему храпел автор?
3. Что советовал отец соседа автору не делать, когда он зашёл к нему на следующий день? (*two* things)
4. Как вы думаете, почему автор не протестовал, но делал всё то, что сосед хотел?

««« THE END »»»

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

LATIN

3 HOURS

NOTE. *Write on alternate lines throughout the paper.*

1. (*The mark for Question 1 will be about 6% of the total.*)

(*a*) Translate into English.

Hac in utramque partem disputatione habita, cum a Cotta primisque ordinibus acriter resisteretur, "Vincite," inquit, "si ita vultis," Sabinus, et id clariore voce, ut magna pars militum exaudiret; "neque is sum," inquit, "qui gravissime ex vobis mortis periculo terrear."

(*b*) Name and account for the case of *disputatione* (l. 1).

(*c*) Name and account for the mood of *terrear* (l. 5).

(*d*) In one or two sentences, state the opposing views of Sabinus and Cotta.

2. (*The mark for Question 2 will be about 7% of the total.*)

(*a*) Translate into English.

Cum maiore in dies contemptione Indutiomarus ad castra accederet, nocte una intromissis equitibus omnium finitimarum civitatum, quos arcessendos curaverat, tanta diligentia omnes suos custodiis intra castra continuit ut nulla ratione ea res enuntiari aut ad Treveros perferri posset.

(*b*) Name and account for the case of *custodiis* (l. 4).

(*c*) Identify, and write the principal parts of *perferri* (l. 5).

(*d*) What was Labienus' plan of battle for the subsequent engagement?

3. (*The mark for Question 3 will be about 8% of the total.*)
Translate into English *either* (*a*) *or* (*b*).

either

(*a*) Nam cum antea per aetatem nondum huius auctoritatem loci attingere auderem statueremque nihil huc nisi perfectum ingenio, elaboratum industria adferri oportere, omne meum tempus amicorum temporibus transmittendum putavi. Ita neque hic

CONTINUED OVER

locus vacuus umquam fuit ab eis, qui vestram causam defenderent, et meus labor, in privatorum periculis caste integreque versatus, ex vestro iudicio fructum est amplissimum consecutus.

or

(*b*) Quodsi Romae Cn. Pompeius privatus esset hoc tempore, tamen ad tantum bellum is erat deligendus atque mittendus: nunc, cum ad ceteras summas utilitates haec quoque opportunitas adiungatur, ut in eis ipsis locis adsit, ut habeat exercitum, ut ab eis qui habent accipere statim possit, quid exspectamus? aut cur non ducibus dis immortalibus eidem, cui cetera summa cum salute rei publicae commissa sunt, hoc quoque bellum regium committamus?

4. (*The mark for Question 4 will be about 2% of the total.*)

(*a*) State *two* of the objections which members of the Senate raised to Pompey's appointment to the Mithridatic command.

(*b*) What arguments did Cicero use to oppose these two objections?

5. (*The mark for Question 5 will be about 5% of the total.*)

(*a*) Translate into English.

Iam mens praetrepidans avet vagari,
iam laeti studio pedes vigescunt.
o dulces comitum valete coetus,
longe quos simul a domo profectos
diversae variae viae reportant.

(*b*) How does Catullus effectively convey his moods of excitement and of regret in this poem?

6. (*The mark for Question 6 will be about 7% of the total.*)

(*a*) Translate into English.

Parcus deorum cultor et infrequens
insanientis dum sapientiae
consultus erro, nunc retrorsum
vela dare atque iterare cursus
cogor relictos: namque Diespiter,
igni corusco nubila dividens
plerumque, per purum tonantes
egit equos volucremque currum.

(*b*) Write out lines 1-4 (*Parcus... cursus*). Mark the scansion, and name the metre.

(*c*) What significance did Horace attach to Diespiter's action?

7. (*The mark for Question 7 will be about 9% of the total.*) Answer *either* (*a*) *or* (*b*).

either

(*a*) (i) Translate into English.

ille dolis instructus et arte Pelasga
sustulit exutas vinclis ad sidera palmas:
"vos aeterni ignes, et non violabile vestrum
testor numen," ait, "vos arae ensesque nefandi,
quos fugi, vittaeque deum, quas hostia gessi:
fas mihi Graiorum sacrata resolvere iura,
fas odisse viros atque omnia ferre sub auras,
si qua tegunt; teneor patriae nec legibus ullis.
tu modo promissis maneas servataque serves
Troia fidem, si vera feram, si magna rependam."

(ii) Write out line 2 (*sustulit . . . palmas*). Mark the scansion, and name the metre.

or

(*b*) (i) Translate into English.

"o lux Dardaniae, spes o fidissima Teucrum,
quae tantae tenuere morae? quibus Hector ab oris
exspectate venis? ut te post multa tuorum
funera, post varios hominumque urbisque labores
defessi aspicimus! quae causa indigna serenos
foedavit vultus? aut cur haec vulnera cerno?"
ille nihil, nec me quaerentem vana moratur,
sed graviter gemitus imo de pectore ducens,
"heu fuge, nate dea, teque his," ait, "eripe flammis.
hostis habet muros; ruit alto a culmine Troia."

(ii) Write out line 2 (*quae . . . oris*). Mark the scansion, and name the metre.

8. (*The mark for Question 8 will be about 4% of the total.*) Answer *either* (*a*) *or* (*b*).

either

(*a*) "The 'piety' of Aeneas reveals itself in his performance of duty to his gods, his family, and his fellow-men." Discuss this characteristic of Aeneas, as developed by Virgil, in the account of the fall of Troy.

or

(*b*) Discuss Horace's philosophy of life as revealed in the poems you have read.

9. (*The mark for Question 9 will be about 15% of the total.*)

Translate into Latin any FIVE of the following sentences. All sentences are equal in value. If more than five are attempted, only the *first five* attempted will be marked.

1. I was not afraid to tell the consul that my army had thrown away its arms and was fleeing.

CONTINUED OVER→

2. Cicero, the celebrated orator, was also very skilled in the art of writing letters.
3. If you pardon the prisoners, they will be of great service to you.
4. While the cavalry were advancing, the enemy attacked them suddenly on the left wing.
5. Do not order me to do what you refuse to do yourself.
6. The children were sent across the river by their father before the burning of the city.
7. Let us go to Rome to discover what is happening there.
8. My son has been persuaded to return home within three days.

10. (*The mark for Question 10 will be about 15% of the total.*)

Translate into Latin.

Although Caesar had not left behind large garrisons, he did not think that the Gauls would dare to revolt against Roman rule. But such was their boldness that for many months there was a danger that the whole of Gaul would gain its freedom. In these circumstances Caesar's officers and men were completely loyal to him; and after hard fighting, he was able to subdue the tribes and bring them again under the authority of the senate and people of Rome.

11. (*The mark for Question 11 will be about 10% of the total.*)

Translate into English.

(*Roman reinforcements surprise the enemy, and Caesar's army turns a threatened defeat into decisive victory.*)

Acriter fit proelium. Nam nostri equites, hostibus pridie superatis, cum suas legiones subsequi meminissent, et pudore cedendi et cupiditate proelii per se conficiendi, fortissime contra pedites proeliantur; hostesque nulla auxilia accedere credentes, ut antea cognoverant, delendi equitatus nostri occasionem nacti esse videbantur. Tum repente legiones confertae in conspectum hostium veniunt. Quibus visis, acies hostium perterritae magno clamore fugae se mandant.

pudor, pudoris, m. — shame

12. (*The mark for Question 12 will be about 12% of the total.*)

Translate into English.

(*Cicero urges his countrymen to punish severely anyone who treats Roman citizens cruelly.*)

Si qui rex, si qua natio aliquid crudelitatis in cives Romanos fecisset, nonne publice puniremus, nonne bello persequeremur? Possemusne hanc iniuriam ignominiamque nominis Romani impunitam dimittere? Quot bella maiores nostros suscepisse arbitramini, quod cives Romani interfecti, quod nautae capti, quod mercatores spoliati essent? Si haec apud barbaros dicerem, non in tanta multitudine civium Romanorum, non apud senatores, optimos civitatis, non in foro populi Romani de tot et tam gravibus suppliciis civium Romanorum, tamen animos hominum etiam ferocissimorum permoverem.

««« THE END »»»

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

LATIN

TEMPS — 3 HEURES

NOTE. N'écrivez qu'à toutes les deux lignes.

1. (*On accordera à la question 1 environ 6% du total des points.*)

(*a*) Traduisez en français.

Hac in utramque partem disputatione habita, cum a Cotta primisque ordinibus acriter resisteretur, "Vincite," inquit, "si ita vultis," Sabinus, et id clariore voce, ut magna pars militum exaudiret; "neque is sum," inquit, "qui gravissime ex vobis mortis periculo terrear."

(*b*) Donnez le cas de *disputatione* (l. 1) et justifiez-en l'emploi.

(*c*) Donnez le mode de *terrear* (l. 5) et justifiez-en l'emploi.

(*d*) En une phrase ou deux, mentionnez les vues opposées de Sabinus et de Cotta.

2. (*On accordera à la question 2 environ 7% du total des points.*)

(*a*) Traduisez en français.

Cum maiore in dies contemptione Indutiomarus ad castra accederet, nocte una intromissis equitibus omnium finitimarum civitatum, quos arcessendos curaverat, tanta diligentia omnes suos custodiis intra castra continuit ut nulla ratione ea res enuntiari aut ad Treveros perferri posset.

(*b*) Donnez le cas de *custodiis* (l. 4) et justifiez-en l'emploi.

(*c*) Identifiez *perferri* (l. 5) et donnez-en les temps primitifs.

(*d*) Quel était le plan de bataille de Labienus pour l'engagement subséquent?

3. (*On accordera à la question 3 environ 8% du total des points.*) Traduisez en français *soit* (*a*), *soit* (*b*).

Soit

(*a*) Nam cum antea per aetatem nondum huius auctoritatem loci attingere auderem statueremque nihil huc nisi perfectum ingenio, elaboratum industria adferri oportere, omne meum tempus amicorum temporibus transmittendum putavi. Ita neque hic locus vacuus umquam fuit ab eis, qui vestram causam defenderent, et meus labor, in privatorum periculis caste integreque versatus, ex vestro iudicio fructum est amplissimum consecutus.

Soit

(*b*) Quodsi Romae Cn. Pompeius privatus esset hoc tempore, tamen ad tantum bellum is erat deligendus atque mittendus:

TOURNEZ →

nunc, cum ad ceteras summas utilitates haec quoque opportunitas adiungatur, ut in eis ipsis locis adsit, ut habeat exercitum, ut ab eis qui habent accipere statim possit, quid exspectamus? aut cur non ducibus dis immortalibus eidem, cui cetera summa cum salute rei publicae commissa sunt, hoc quoque bellum regium committamus?

4. (*On accordera à la question 4 environ 2% du total des points.*)

(*a*) Mentionnez *deux* des objections soulevées par les membres du Sénat contre la nomination de Pompée au commandement des forces de Mithridate.

(*b*) Quelles raisons employa Cicéron pour s'opposer à ces deux objections?

5. (*On accordera à la question 5 environ 4% du total des points.*)

(*a*) Traduisez en français.

Iam mens praetrepidans avet vagari,
iam laeti studio pedes vigescunt.
o dulces comitum valete coetus,
longe quos simul a domo profectos
diversae variae viae reportant.

(*b*) Comment Catulle transmet-il ses sentiments d'enthousiasme et de regret dans ce poème?

6. (*On accordera à la question 6 environ 7% du total des points.*)

(*a*) Traduisez en français.

Parcus deorum cultor et infrequens
insanientis dum sapientiae
consultus erro, nunc retrorsum
vela dare atque iterare cursus
cogor relictos: namque Diespiter,
igni corusco nubila dividens
plerumque, per purum tonantes
egit equos volucremque currum.

(*b*) Récrivez les quatre premières lignes. Scandez-les et nommez la forme métrique.

(*c*) Quelle signification Horace attache-t-il à l'action de Diespiter?

7. (*On accordera à la question 7 environ 9% du total des points.*)
Répondez *soit à* (*a*), *soit à* (*b*).

Soit

(*a*) (i) Traduisez en français.

ille dolis instructus et arte Pelasga
sustulit exutas vinclis ad sidera palmas:
"vos aeterni ignes, et non violabile vestrum
testor numen," ait, "vos arae ensesque nefandi,
quos fugi, vittaeque deum, quas hostia gessi:
fas mihi Graiorum sacrata resolvere iura,
fas odisse viros atque omnia ferre sub auras,
si qua tegunt; teneor patriae nec legibus ullis.
tu modo promissis maneas servataque serves
Troia fidem, si vera feram, si magna rependam."

(ii) Récrivez la deuxième ligne (*sustulit......palmas*). Scandez-la et nommez la forme métrique employée.

Soit

(*b*) (i) Traduisez en français.

“o lux Dardaniae, spes o fidissima Teucrum,
quae tantae tenuere morae? quibus Hector ab oris
exspectate venis? ut te post multa tuorum
funera, post varios hominumque urbisque labores
defessi aspicimus! quae causa indigna serenos
foedavit vultus? aut cur haec vulnera cerno?”
ille nihil, nec me quaerentem vana moratur,
sed graviter gemitus imo de pectore ducens,
“heu fuge, nate dea, teque his,” ait, “eripe flammis.
hostis habet muros; ruit alto a culmine Troia.”

(ii) Récrivez la deuxième ligne (quae..........oris). Scandez-la et nommez la forme métrique employée.

8. (*On accordera à la question 8 environ 4% du total des points.*)

Répondez *soit à* (*a*), *soit à* (*b*).

Soit

(*a*) “La piété” d’Ennée se révèle dans l’accomplissement de ses devoirs envers ses dieux, sa famille et ses concitoyens.” Traitez de ce trait du caractère d’Enée que développe Virgile dans sa description de la chute de Troie.

Soit

(*b*) D’après les poèmes que vous avez lus, traitez de la philosophie de la vie que se fait Horace.

9. (*On accordera à la question 9 environ 15% du total des points.*)

Ne traduisez en latin que CINQ des phrases suivantes. Toutes les phrases ont la même valeur. Si plus de cinq phrases sont traduites, on n’accordera des points qu’aux *cinq premières.*

1. Je ne craignais pas de dire au consul que mon armée avait rejeté ses armes et était en fuite.
2. Cicéron, l’orateur célèbre, était aussi très habile dans l’art de rédiger des lettres.
3. Si vous pardonnez aux prisonniers, ils vous seront d’un grand service.
4. Alors que la cavalerie avançait, l’ennemi l’attaqua soudainement à l’aile gauche.
5. Ne me commandez pas de faire ce que vous refusez de faire vous-même.
6. Les enfants ont été envoyés par leur père de l’autre côté de la rivière avant l’incendie de la cité.
7. Rendons-nous à Rome pour découvrir ce qui s’y passe.
8. Mon fils a été persuadé de retourner à la maison en moins de trois jours.

—TOURNEZ→

10. (*On accordera à la question 10 environ 15% du total des points.*)

Traduisez en latin.

Bien qu'il n'ait pas laissé de grandes garnisons à l'arrière, César ne pensa pas que les Gaulois oseraient se révolter contre la loi romaine. Mais leur audace était telle qu'au cours de plusieurs mois il y avait danger que toute la Gaule gagnerait sa liberté. En ces circonstances, les officiers et les hommes de César lui furent entièrement loyaux; et après avoir rudement combattu, il put subjuguer les tribus et les ramener sous l'autorité du sénat et du peuple de Rome.

11. (*On accordera à la question 11 environ 10% du total des points.*)

Traduisez en français.

(*Des renforts romains surprennent l'ennemi et l'armée de César change une menace de défaite en une victoire décisive.*)

Acriter fit proelium. Nam nostri equites, hostibus pridie superatis, cum suas legiones subsequi meminissent, et pudore cedendi et cupiditate proelii per se conficiendi, fortissime contra pedites proeliantur; hostesque nulla auxilia accedere credentes, ut antea cognoverant, delendi equitatus nostri occasionem nacti esse videbantur. Tum repente legiones confertae in conspectum hostium veniunt. Quibus visis, acies hostium perterritae magno clamore fugae se mandant.

pudor, pudoris, m. — honte

12. (*On accordera à la question 12 environ 12% du total des points.*)

Traduisez en français.

(*Cicéron incite ses concitoyens à punir sévèrement quiconque est cruel envers les citoyens romains.*)

Si qui rex, si qua natio aliquid crudelitatis in cives Romanos fecisset, nonne publice puniremus, nonne bello persequeremur? Possemusne hanc iniuriam ignominiamque nominis Romani impunitam dimittere? Quot bella maiores nostros suscepisse arbitramini, quod cives Romani interfecti, quod nautae capti, quod mercatores spoliati essent? Si haec apud barbaros dicerem, non in tanta multitudine civium Romanorum, non apud senatores, optimos civitatis, non in foro populi Romani de tot et tam gravibus suppliciis civium Romanorum, tamen animos hominum etiam ferocissimorum permoverem.

««« FIN »»»

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

GREEK

3 HOURS

NOTE. *Write on alternate lines throughout the paper.*

1. (*The mark for Question 1 will be about 14% of the total.*)

(*a*) Translate into English.

ἀνὴρ δέ τις, Ὑδροιάδης ὀνόματι, ἐπειρᾶτο προσβαίνειν οὗπερ οὐδεὶς ἐτέτακτο φύλαξ· ἀποτόμου γὰρ οὔσης ταύτῃ καὶ ἀμάχου τῆς ἀκροπόλεως, οὐκ ἐφοβοῦντο οἱ Λυδοὶ μὴ πολεμίων τις ἐπέλθοι. ἰδὼν δὲ τῇ προτεραίᾳ τῶν Λυδῶν τινα ἀπὸ τῆς ἀκροπόλεως καταβάντα ἐπὶ κυνῆν ἄνωθεν κατακυλισθεῖσαν καὶ ἀναλαβόντα, διενοεῖτο καὶ αὐτὸς ἀναβῆναι. τότε δὴ αὐτός τε ἀνέβη καὶ ἄλλοι μετ' αὐτόν. πολλῶν δὲ προσβάντων, οὕτω Σάρδεις ἑάλωσαν.

(*b*) Name and account for the case of *ὀνόματι* (l. 1), *προτεραίᾳ* (l. 4), *πολλῶν* (l. 6).

(*c*) Identify, and write the principal parts of *ἰδὼν* (l. 3), *ἀναβῆναι* (l. 5).

(*d*) What were the events which led up to the capture of Sardis?

(*e*) How does this passage illustrate one feature of Herodotus' writing?

2. (*The mark for Question 2 will be about 9% of the total.*)

(*a*) Translate into English.

Ἐς δὲ τὴν Σπάρτην ὡς ἠγγέλθη τὰ γεγενημένα περὶ Πύλον, ἔδοξε τοῖς Λακεδαιμονίοις σπονδὰς μὲν ποιήσασθαι πρὸς τοὺς τῶν Ἀθηναίων στρατηγούς, ἀποστεῖλαι δὲ ἐς τὰς Ἀθήνας πρέσβεις περὶ συμβάσεως, καὶ τοὺς ἄνδρας ὡς τάχιστα πειρᾶσθαι κομίσασθαι. ἀφικόμενοι δὲ οἱ πρέσβεις προκαλοῦνται τοὺς Ἀθηναίους ἐς φιλίαν καὶ διάλυσιν πολέμου, διδόντες μὲν εἰρήνην καὶ συμμαχίαν, ἀνταιτοῦντες δὲ τοὺς ἐκ τῆς νήσου ἄνδρας.

(*b*) Why did the Athenians reject the Lacedaemonian proposal of peace?

(*c*) In your opinion, were the Athenians justified in refusing to make peace at this time?
Give reasons for your answer.

(*d*) State one feature of Thucydides' approach to the writing of history.

CONTINUED OVER→

3. (*The mark for Question 3 will be about 6% of the total.*)

Answer *either* (*a*) *or* (*b*).

either

(*a*) (i) Translate into English.

καὶ γὰρ ἐπιμελεῖσθαι θεοὺς ἐνόμιζεν ἀνθρώπων, οὐχ ὥσπερ οἱ πολλοὶ νομίζουσιν· οὗτοι μὲν γὰρ οἴονται τοὺς θεοὺς τὰ μὲν εἰδέναι, τὰ δὲ οὐκ εἰδέναι· Σωκράτης δὲ ἡγεῖτο πάντα θεοὺς εἰδέναι, τά τε λεγόμενα καὶ τὰ πραττόμενα καὶ τὰ σιγῇ βουλευόμενα, καὶ πανταχοῦ παρεῖναι καὶ σημαίνειν τοῖς ἀνθρώποις περὶ τῶν ἀνθρωπείων.

(ii) Name and account for the mood of *εἰδέναι* (1. 2).
(iii) Explain the usage of the participle *λεγόμενα* (1. 3).

or

(*b*) (i) Translate into English.

καὶ ὑμῖν, ὡς ἔοικε, τῶν κύκνων δοκῶ φαυλότερος εἶναι τὴν μαντικήν, οἳ ἐπειδὰν αἴσθωνται ὅτι δεῖ αὐτοὺς ἀποθανεῖν, ᾄδοντες καὶ ἐν τῷ πρόσθεν χρόνῳ, τότε δὴ μάλιστα ᾄδουσι, χαίροντες ὅτι μέλλουσι παρὰ τὸν θεὸν ἀπιέναι, οὗπερ εἰσὶ θεράποντες. οὗτοι γάρ, ὡς οἶμαι, προειδότες τὰ ἐν Ἅιδου ἀγαθά, ᾄδουσι καὶ χαίρουσι μᾶλλον ἢ τὸ πρίν.

(ii) Name and account for the case of *κύκνων* (1. 1),
μαντικήν (1. 1).
(iii) Name and account for the mood of *αἴσθωνται* (1. 2).

4. (*The mark for Question 4 will be about 11% of the total.*)

Answer *either* (*a*) *or* (*b*).

either

(*a*) (i) Translate into English.

αὐτὰρ ἐπεὶ σίτου τάρφθεν δμωαί τε καὶ αὐτή,
σφαίρῃ ταίδ' ἄρ' ἔπαιζον, ἀπὸ κρήδεμνα βαλοῦσαι·
τῇσι δὲ Ναυσικάα λευκώλενος ἤρχετο μολπῆς.
οἵη δ' Ἄρτεμις εἶσι κατ' οὔρεος ἰοχέαιρα,
ἢ κατὰ Τηΰγετον περιμήκετον ἢ Ἐρύμανθον,
τερπομένη κάπροισι καὶ ὠκείῃς ἐλάφοισιν·
τῇ δέ θ' ἅμα νύμφαι, κοῦραι Διὸς αἰγιόχοιο,
ἀγρονόμοι παίζουσι· γέγηθε δέ τε φρένα Λητώ·

(ii) By stating one fact about *each*, identify the following:
Ἄρτεμις (1. 4), Ἐρύμανθον (1. 5), Λητώ (1. 8).
(iii) Write out lines 2 and 3 (*σφαίρῃ . . . . .μολπῆς*).
Name the metre. Mark the scansion.

or

(*b*) (i) Translate into English.

αὐτὰρ ἐπεὶ τό γ’ ἄκουσ’ ἱερὸν μένος Ἀλκινόοιο,
χειρὸς ἑλὼν Ὀδυσῆα δαΐφρονα ποικιλομήτην
ὦρσεν ἀπ’ ἐσχαρόφιν καὶ ἐπὶ θρόνου εἷσε φαεινοῦ,
υἱὸν ἀναστήσας ἀγαπήνορα Λαοδάμαντα,
ὅς οἱ πλησίον ἷζε, μάλιστα δέ μιν φιλέεσκεν.
χέρνιβα δ’ ἀμφίπολος προχόῳ ἐπέχευε φέρουσα
καλῇ χρυσείῃ ὑπὲρ ἀργυρέοιο λέβητος,
νίψασθαι· πάρα δὲ ξεστὴν ἐτάνυσσε τράπεζαν.

(ii) Give the Attic equivalent of *ἄκουσ’* (1. 1), *Ἀλκινόοιο* (1. 1), *χρυσείῃ* (1. 7).

(iii) Write out lines 7 and 8 (*καλῇ.......τράπεζαν*). Name the metre. Mark the scansion.

5. (*The mark for Question 5 will be about 7% of the total.*)

(*a*) Translate into English.

Ὠγυγίη τις νῆσος ἀπόπροθεν εἰν ἁλὶ κεῖται,
ἔνθα μὲν Ἄτλαντος θυγάτηρ δολόεσσα Καλυψὼ
ναίει εὐπλόκαμος, δεινὴ θεός. οὐδέ τις αὐτῇ
μίσγεται οὔτε θεῶν οὔτε θνητῶν ἀνθρώπων.
ἀλλ’ ἐμὲ τὸν δύστηνον ἐφέστιον ἤγαγε δαίμων
οἶον, ἐπεί μοι νῆα θοὴν ἀργῆτι κεραυνῷ
Ζεὺς ἐλάσας ἐκέασσε μέσῳ ἐνὶ οἴνοπι πόντῳ.

(*b*) State the circumstances in which Odysseus is relating this tale.

6. (*The mark for Question 6 will be about 6% of the total.*)

Answer *either* (*a*) *or* (*b*).

either

(*a*) "Homer's account of the personality and actions of Nausicaa makes her a most appealing character." Discuss this statement.

or

(*b*) "The greatness of Socrates is revealed by his deeds as well as his thoughts." Discuss this statement.

CONTINUED OVER

7. (*The mark for Question 7 will be about 25% of the total.*)

Translate into Greek.

1. All the commanders were ordered to sail as quickly as possible in the direction of Pylos.

2. Although the Greeks knew that their ships had been captured by the enemy, they were unwilling to make peace.

3. Are not those who speak the truth and those who help others always honoured in that city?

4. After this the Athenians, fearing that they would be unable to conquer the Spartans on the island, sent envoys home to ask for more hoplites.

5. When the messenger reported what had happened, we were at a loss as to what to do.

6. Do not try to attack the walls of the acropolis unless your allies arrive within three days.

8. (*The mark for Question 8 will be about 22% of the total.*)

Translate into English:

(*The Mantineans decide to fortify their city in spite of the disapproval of the Spartans.*)

Ἐνταῦθα δὴ οἱ Μαντινεῖς, ὡς ἤδη αὐτόνομοι παντάπασιν ὄντες,
συνῆλθόν τε πάντες καὶ ἐψηφίσαντο μίαν πόλιν τὴν Μαντίνειαν ποιεῖν
καὶ τειχίζειν τὴν πόλιν. οἱ δ' αὖ Λακεδαιμόνιοι ἡγοῦντο, εἰ τοῦτο ἄνευ
τῆς σφετέρας γνώμης ἔσοιτο, χαλεπὸν ἔσεσθαι. πέμπουσιν οὖν Ἀγησίλαον
5 *πρεσβευτὴν πρὸς τοὺς Μαντινέας, ὅτι ἐδόκει πατρικὸς φίλος αὐτοῖς εἶναι.*
ἐπεὶ δὲ ἀφίκετο πρὸς αὐτούς, τὸν μὲν δῆμον τῶν Μαντινέων οἱ ἄρχοντες
οὐκ ἤθελον συλλέξαι αὐτῷ, πρὸς δὲ σφᾶς ἐκέλευον λέγειν ὅτου δέοιτο.
ὁ δὲ ὑπισχνεῖτο αὐτοῖς, ἐὰν νῦν ἐπίσχωσι τῆς τειχίσεως, ποιήσειν ὥστε
μετὰ τῆς Λακεδαίμονος γνώμης καὶ μὴ δαπανηρῶς τειχισθῆναι τὸ τεῖχος.
10 *ἐπεὶ δὲ ἀπεκρίναντο ὅτι ἀδύνατον εἴη ἐπισχεῖν, δόγματος γεγενημένου πάσῃ*
τῇ πόλει ἤδη τειχίζειν, ἐκ τούτου ὁ μὲν Ἀγησίλαος ἀπῄει ὀργιζόμενος·
στρατεύειν γε μέντοι ἐπ' αὐτοὺς οὐ δυνατὸν ἐδόκει εἶναι, ἐπ' αὐτονομίᾳ τῆς
εἰρήνης γεγενημένης.

ἐπέχω (l. 8)—I desist from
δόγμα (l. 10)—a decree

««« THE END »»»

1867 1967

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

SPANISH

3 HOURS

NOTE. *Write answers on alternate lines throughout the paper. Write all numbers in the sentences in words.*

Approximate Percentage Values

A

Contéstese *en español* con oraciones completas a las siguientes preguntas sobre *Lluvia roja.*

1. ¿A qué personajes de la novela pertenecen *cuatro* de las alusiones siguientes?
   (*a*) Su anhelo de ser monja estaba para realizarse. Había sido siempre tranquila, callada...
   (*b*) [Era] un hombre corpulento, vestido de blanco.
   (*c*) Ya está rico. Por toda esta zona, él manda. Es el dedo chiquito del general Medina.
   (*d*) ... una señora esbelta y muy blanca que había salido de la casa. 28
   (*e*) [Tenía] diez meses de edad, [y] tendió los brazos a Elisa....
   (*f*) ... un hombre que se había puesto de rodillas en las losas y que miraba fijamente al suelo.

2. ¿Cuál es la explicación de Enrique Montero de *uno* de los crímenes siguientes? (*unas 35 palabras*)
   (*a*) la muerte de José María Rivera
   (*b*) la muerte de los hermanos de Enrique Altamira

3. En *uno* de los casos siguientes, dígase *en unas 50 palabras* lo que pasó en esta sección de la novela.
   (*a*) "El rió, el caimán, las ardillas, la huerta..."
   (*b*) "Su amor, su fuga, su matrimonio..."

4. "... no tuvo sino un anhelo ardiente, un agudo deseo que lo asombró." ¿Qué "agudo deseo" tuvo Enrique Montero?

CONTINUED OVER→

Approximate Percentage Values

5. Explíquese el significado de *dos* de los siguientes pasajes sacados de la novela. (*unas 35 palabras en cada caso*)
   (*a*) "¿Lista la comisión que te di? — le preguntó en voz alta. — Lista, mi general."
   (*b*) "La confianza del general estuvo a punto de resultarle trágica el primer día de diciembre."
   (*c*) "No haré pues nada en su contra. Tampoco haré nada en su favor."
   (*d*) "La recordó, en un relámpago, caminando lentamente a la orilla del río, esbelta, tímida, y candorosa..."
6. ¿Por qué fueron para Elisa los días vividos en la capital "los de una dicha suprema"? (*tres* puntos)
7. ¿Por qué mató Enrique Montero a su caballo?
8. ¿En dónde le encerraron a Enrique Montero después de capturarle?
9. ¿Qué quiere decir "la ley fuga"?
10. ¿Qué decisión repentina le perdió a Enrique Montero?
11. ¿Quién mató a Elisa, y con qué arma?
12. Escríbanse *unas 20 palabras* sobre *uno* de los siguientes detalles de la novela.
    (*a*) La reacción psicológica de Elisa ante la despedida de Enrique Montero ("Adiós ... Me voy y no volverás a verme.")
    (*b*) El significado simbólico del "buen espino" ("— ¡Se ha espinado, señora! — exclamó Perpetua.")

B

10 Léase esta selección y contéstese *en español* a las preguntas que siguen.

El atleta, en la fuga de los más briosos ejercicios; el guerrero, mientras riñe la más brava batalla, sostenidos por el entusiasmo y por la excitación nerviosa, no sienten su cansancio ni llegan a postrarse. La postración no sobreviene sino después del triunfo. El soldado de Maratón no cayó muerto hasta que dio a los atenienses la nueva de la victoria. No de otra suerte don Pedro hacía maravillosamente su papel mientras que estaba en presencia de doña María o en presencia de otra persona cualquiera. Pero en el retiro de su cuarto, como si se aflojasen los resortes que tenían sus nervios en perpetua tensión, solía caer desfallecido. Mal ahogados suspiros brotaban de su pecho, en el cual sentía opresión dolorosa; tenía vértigos, la vista se le nublaba, se le dormían los dedos o notaba en ellos insólito frío; las imágenes que guardaba en su memoria se revolvían en confusión; le dolía la cabeza, y hasta se le trababa la lengua y tartamudeaba cuando hablaba con Ramón, su criado.

Approximate Percentage Values

1. Substitúyase, en *cuatro* casos solamente, la expresión con una sola palabra conveniente encontrada en el pasaje.
   - (*a*) que continúa siempre
   - (*b*) de una manera extraordinaria
   - (*c*) éxito feliz
   - (*d*) caer sin fuerzas
   - (*e*) estado de apartamiento
   - (*f*) tenía la costumbre de

2. Contéstese *en español* con oraciones completas.
   - (*a*) ¿Quién era Ramón?
   - (*b*) ¿A qué actividad se dedica (i) el atleta; (ii) el guerrero?
   - (*c*) ¿Por qué no se sienten cansados a veces el atleta y el guerrero?
   - (*d*) ¿Qué llevaba el soldado de Maratón?
   - (*e*) ¿Cuándo caía desmayado D. Pedro?
   - (*f*) (i) ¿Podía D. Pedro ver claramente durante un ataque nervioso?
     - (ii) ¿Cómo lo sabe Vd.?
   - (*g*) ¿Qué sentía D. Pedro en los dedos?

C

8 Tradúzcase *al inglés* el pasaje siguiente.

Al día siguiente Juan fue a visitar a Rafaela, que vivía en el primer piso de una magnífica casa, no lejos de la Plaza de la Estrella, en calle y barrio nuevos y elegantes. Rafaela no estaba en casa o no recibía. El joven volvió casi de diario, pero siempre en balde.

Pero una noche acudió tan temprano que acertó a encontrarla acompañada de varios amigos íntimos que habían estado a comer con ella. Logró cruzar con ella algunas palabras, pero tuvo que contenerse durante más de media hora hasta que ella se cansase de charlar con sus admiradores. Espió la ocasión propicia en que ella estaba menos rodeada, a fin de apartar a los interlocutores enojosos y poder hablar con la señorita sin que nadie interviniese en la conversación ni le molestase.

D

8 Tradúzcanse *al español* las palabras entre paréntesis. (*No se copien las oraciones completas.*)

1. Sin decir (anything), salió de la casa.
2. Alfonso (the Twelfth) murió hace muchos años.
3. Prohibe que yo (pay) la cuenta.
4. Hacía mucho tiempo que los sudamericanos (had desired) librarse.
5. Levántate y (put on) el sombrero.

CONTINUED OVER

6. Ha quitado la espada (from) este soldado.
7. ¿No hay nadie que (plays) a la pelota?
8. Conviene que ellos (prepare) el documento.
9. Continúe Vd. (to read) — gritó el anciano.
10. Él será respetado (by) todos.
11. El tren (is about to leave).
12. Esta casa (was built) por un buen arquitecto.
13. No es bueno, (but) malo.
14. Mañana (there will be) muchos hombres en la ciudad.
15. Nació en (eighteen hundred and fifty-five).
16. La iglesia y la escuela (were opened) en el siglo pasado.

E

Tradúzcase al español.

36 1. It is extremely hot today, and I am very thirsty. Please bring me a glass of cold water. When night falls, we can take a walk and enjoy the cool mountain breezes. In the meantime, let us sit down in the shade of these tall trees.

2. I am very glad that you want to go to Madrid to spend a few months. I shall give you the information you require so that your stay in the capital may be a pleasant one. There are so many places to visit!

3. If you had started to study this language at the age of eleven, you would have learned much more. Nevertheless, even three years of hard work in any subject are very useful. You will not fail to remember what your teacher has told you, will you?

4. "You went to sleep, Juanito, and allowed the cows to run away," protested his mother. "I am very sorry," he answered, "but I was very tired and couldn't stay awake. Now I shall do everything possible to find them and make them return to the field."

5. All that we have seen has been accomplished by one great man. It is he, and not his native land, who is the real power in Europe. And let us not forget that he has won this position by his personal merit and not through the efforts of others.

6. Yesterday he saw many people arriving at the station. It was a day of general celebration, and many tourists had come to join the processions which were to pass by the castle. The new arrivals were waiting to be taken to their hotels.

F

Escríbanse *en español* unas 150 palabras sobre *uno* de los siguientes temas sacados de *Lluvia roja.*

10 1. El verdadero Enrique Montero: Una descripción de su carácter
2. El México de 1923: Problemas políticos y sociales

««« THE END »»»

1867 1967

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

ITALIAN

3 HOURS

NOTE. *Write on alternate lines throughout the paper. Write all numbers in the sentences in words.*

Approximate Percentage Values

A

Rispondere in italiano, con frasi complete, a *otto* delle seguenti domande su *I Promessi Sposi.* (*15-30 parole per ogni risposta*)

16 1. Come viene Renzo a sapere il vero impedimento al suo matrimonio?

2. Che parte fa il conte Attilio nella storia?

3. Che vuol dire "il matrimonio per sorpresa"?

4. Perchè non si era sposata Perpetua?

5. "...Sappiate tutti ch'io ho già in mano un filo, per aiutarvi." Perchè dice questo Fra Cristoforo quando ritorna dal suo incontro con Don Rodrigo?

6. Perchè era partita Lucia dalla casa prima che i bravi arrivassero per lei?

7. Come indica l'autore che Don Abbondio si dilettava di leggere? (*due* punti)

8. Che cosa vuol dire Fra Cristoforo con "omnia munda mundis" quando arrivano i promessi sposi al convento cappuccino?

9. Che cosa fece Menico durante il giorno nel quale aiutò Agnese?

10. Che cosa facevano i bravi nel tempo di Renzo e Lucia?

11. Perchè Renzo invitò Tonio all'osteria?

B

In *otto* delle seguenti citazioni, dare il nome della persona che parla, e spiegare *brevemente in italiano* le circostanze nelle quali le frasi sono dette.

16 1. —Presto, presto! pistole in mano, coltelli in pronto, tutti insieme; e poi anderemo: così si va.

CONTINUED OVER

2. —Ebbene: avrò pazienza per una settimana; ma ritenga bene che, passata questa, non m'appagherò più di chiacchiere.

3. —Perchè siam come il mare, che riceve acqua da tutte le parti, e la torna a distribuire a tutti i fiumi.

4. —Sapete che sarà un bello spettacolo vedervi tutto compunto, e con gli occhi bassi!

5. —Eh! le schioppettate non si danno via come confetti; e guai se questi cani dovessero mordere tutte le volte che abbaiano!

6. —Noi saremmo indegni della vostra misericordia, se non ve la chiedessimo di cuore per lui: ne ha tanto bisogno!

7. —Lor signori son uomini di mondo, e sanno benissimo come vanno queste faccende.

8. —Come! non lo sapete? gente in casa del signor curato. Animo, figliuoli: aiuto!

9. —Gli raccontai tutto, l'ultima volta che siamo andate insieme alla chiesa del convento.

10. —Voi avete creduto che Dio non saprebbe difenderla! Voi avete disprezzato il suo avviso! Vi siete giudicato.

11. —Ah! ah! vi siete però fatto tagliare il ciuffo. Avete avuto prudenza.

C

10 Leggere questo brano. Poi, usando le informazioni che contiene, rispondere *in italiano*, con frasi complete, a tutte le domande che lo seguono.

Quando io, cane, vengo condotto a spasso, dinanzi a quel gran palazzo con statue, torri e cupole, vedo spesso una specie di autocarro di colore nero molto bello, pieno de fronzoli, fermo dinanzi al portone. Intorno c'è una quantità di gente. E a un tratto dal portone escono quattro uomini che portano sulle spalle una lunga cassa senza scritte sopra. Anche questa cassa è molto bella, riccamente decorata. E la gente la guarda mentre i quattro uomini con grande precauzione la caricano sul bellissimo camione. Che cosa ci sarà dentro? L'attenzione del pubblico, il lusso dell'apparato, la solennità della manovra lascerebbero pensare che la cassa contenga qualcosa di straordinariamente buono, cibi rari e pregiati, comunque roba da mangiare, altrimenti non si spiegherebbero tante cerimonie. Mentre poi la misteriosa cassa viene messa sul furgone, spesso ho notato che alcuni dei presenti, specialmente donne, scoppiano in singhiozzi. Anche questo induce a credere che si tratti di vivande prelibate. Vedendo che le portano via, i più golosi ne hanno un tale dispiacere che non riescono a trattener le lacrime.

Ecco le conclusioni a cui porterebbe il semplice buon senso. Ma gli uomini sono dei tipi così strani. Va a indovinare tu, che cosa chiudono mai in quei cofani magnifici, e perchè se li lasciano portare via così, sotto il naso, senza fare nessuna resistenza. Piangono come vitelli ma non muovono un dito per impedire la partenza. Che curiosa gente!

1. Infatti, che sarebbe questo palazzo?
2. (*a*) In verità, che è la cassa che portano i quattro uomini?
   (*b*) In verità, che cosa contiene?
3. Secondo il cane, perchè piangono coloro che vedono la cassa?
4. Come dimostra la gente che si tratta di un'occasione solenne? (*tre* punti)
5. Che cosa regge il "buon senso" del cane?

D

10 Tradurre *in inglese* il brano seguente.

A poco a poco cominciò poi a scoprir campanili e torri e cupole e tetti; scese allora nella strada, camminò ancora qualche tempo, e quando s'accorse d'esser ben vicino alla città, s'accostò a un viandante, e, inchinatolo, con tutto quel garbo che seppe, gli disse:

—Di grazia, quel signore.

—Che volete, bravo giovine?

—Saprebbe insegnarmi la strada più corta, per andare al convento de' cappuccini dove sta il padre Bonaventura?

L'uomo a cui Renzo s'indirizzava, era un agiato abitante del contorno, che, andato quella mattina a Milano, per certi suoi affari, se ne tornava, senza aver fatto nulla, in gran fretta, chè non vedeva l'ora di trovarsi a casa, e avrebbe fatto volentieri di meno di quella fermata. Con tutto ciò, senza dar segno d'impazienza, rispose molto gentilmente: —figliuol caro, de' conventi ce n'è più d'uno: bisognerebbe che mi sapeste dir più chiaro quale è quello che voi cercate—. Renzo allora si levò di seno la lettera del padre Cristoforo, e la fece vedere a quel signore.

E

8 Tradurre *in italiano* le parole fra parentesi. (*Non scrivere la frase intera.*)

1. Dov'è la mia cravatta? (Here it is).
2. Il treno parte sempre (on Wednesday).
3. (He has hurt) alla gamba.
4. Ho visto (his little brother).

CONTINUED OVER→

5. Cercavo i miei quaderni e (I have found them).
6. Avrà bisogno di (two catalogues).
7. Ha perduto il libro. (He will look for it) domani.
8. Stamane (she has remained) a casa.
9. Tutto il paese è (covered with) neve.
10. Non conoscevo (those students).
11. Adesso vuole (to speak to her about it).
12. Eravamo più stanchi (than) credeva.
13. Non si pensa a queste cose quando (one is young).
14. (Whoever it is) non voglio vederlo.
15. Secondo la zia (we are wrong).
16. Non ha che (three fingers) nella mano sinistra.

F

30 Tradurre *in italiano* le frasi seguenti.

1. Tomorrow we shall go to Doctor Bruni's without the others' knowing it. We have something to explain to him and want him to realize that we will try to help him as much as possible.

2. Mr. and Mrs. Russo came to Canada in 1955 so that thei family could begin a new life. When one of their friends talke about it, they always reminded him that if they had stayed in Europe they would not have been able to enjoy such opportunities.

3. Last Tuesday I received a letter which said that they woul send me my suit on July 2nd. I shall have to do without it until i comes. What a pity! I needed it for the party.

4. Beppino, it takes at least forty minutes to do this work. You must finish it before eleven o'clock sharp. Do it! When you are ready, tell me so immediately. I have no intention of waiting for you until noon. If you had listened to me, you would be free now.

5. During the long wars of the seventeenth century the inhabitants of Lombardy suffered great misfortunes. For many Milanese, faith in the will of God was the only strength which they had left.

6. He likes to take a trip every summer. He never forgets to make all the necessary arrangements. For example, he buys his tickets well in advance and he writes to all the best hotels. However, the last time he went to Rome he failed to make a reservation.

G

10 Scrivere *in italiano* un componimento di circa 120 a 150 parole su *uno* dei temi seguenti.

1. Le relazioni fra Don Abbondio e Perpetua
2. L'applicazione della giustizia nel milanese del seicento secondochè la vediamo in questo romanzo
3. Renzo: il suo carattere e la parte che fa nel romanzo

«« THE END »»

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

MUSIC

2 HOURS

Section A

Approximate Percentage Values

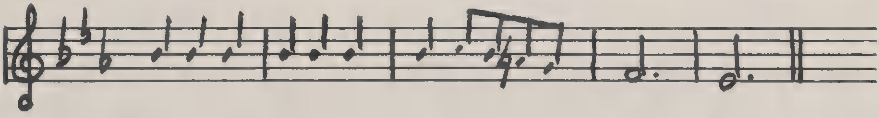
NOTE 1. *Answer ALL questions in Section A.*

NOTE 2. *Answer Questions 1, 2, and 3 on the music manuscript paper provided by the Presiding Officer.*

8 1. Write the following scales.
  (*a*) D major in the bass clef
  (*b*) the relative harmonic minor of D major in the alto clef
  (*c*) the relative melodic minor of D major in the tenor clef
  (*d*) the tonic harmonic minor of D major in the treble clef

4 2. (*a*) Write, in the treble clef and in the original key, the first theme from the first movement of the *Symphony No. 3* by Beethoven.

(*b*) Transpose the following to the key of F major.



5 3. (*a*) Write *each* of the following intervals above D in the treble clef.

(i) perfect fifth
(ii) minor seventh
(iii) major second
(iv) augmented fourth
(v) diminished octave

(*b*) Write *each* of the following intervals below A in the bass clef.

(i) perfect fourth
(ii) major third
(iii) augmented fifth
(iv) minor sixth
(v) diminished fifth

CONTINUED OVER

Approximate Percentage Values

5 4. Define concisely *ten* of the following terms.

(*a*) allegro affettuoso
(*b*) sf
(*c*) un poco ritard
(*d*) a tempo
(*e*) tutti
(*f*) vivace
(*g*) lento et grave
(*h*) rubato
(*i*) morendo
(*j*) dolce
(*k*) arco
(*l*) scherzo

13 5. (*a*) Bach's *Christ lag in toten Banden* (*Cantata No. 4*) has one principal unifying element. Identify this element and describe its use in *each* verse of the cantata.

(*b*) Bach portrays the prevailing moods of Easter throughout the *Cantata No. 4*. Select and describe *three* places in the cantata where mood is most vividly conveyed.

12 6. (*a*) Describe the pictures or impressions which Claude Debussy projected through the music of *two* of his *Préludes pour Piano*. Explain how the music creates the impression or picture in *each* of the two preludes you have selected.

(*b*) Name and write, in letters or on music manuscript paper, *two* of the scales or modes used by Debussy that differed from those used by most composers of the eighteenth and nineteenth centuries.

12 7. (*a*) Describe the use of "Sonata-Allegro" form in the first movement of the *Beethoven Symphony No. 3*.

(*b*) Describe briefly and outline the form of the second movement of the *Beethoven Symphony No. 3*.

(*c*) Explain the significance of the title "Eroica" associated with the *Beethoven Symphony No. 3*.

Section B

Answer *EITHER* Question 8 *OR* Question 9.

either

8. Discuss briefly *three* characteristics of the music of the Romantic period and illustrate each characteristic with reference to the *Schumann Piano Concerto in A Minor*. 7

or

9. Contrast, in a brief essay, the music of Schumann with the music of Debussy.

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Section C

Answer *ALL* Questions in Section C.

8 10. Write a short biographical account of *one* of the composers of the prescribed works you have studied this year. Include in your answer reference to his significant music compositions.

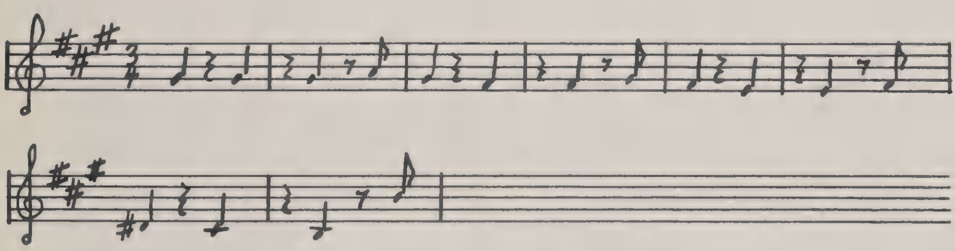
6 11. Describe *three* of the following music forms.

(*a*) symphony
(*b*) cantata
(*c*) concerto
(*d*) prelude

10×2 12. For *each* of the following themes, state

(*a*) the name of the composition,
(*b*) the movement or section of the composition,
(*c*) the name of the composer.

1.



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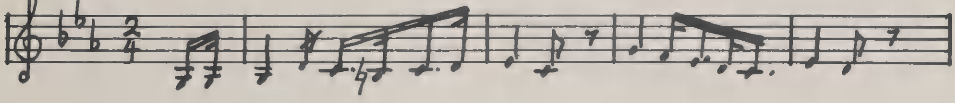

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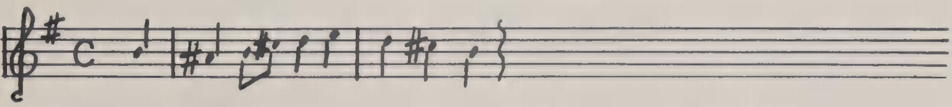

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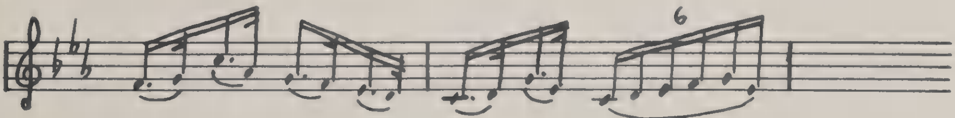

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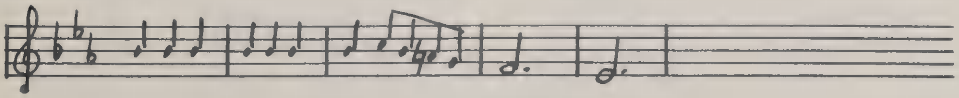

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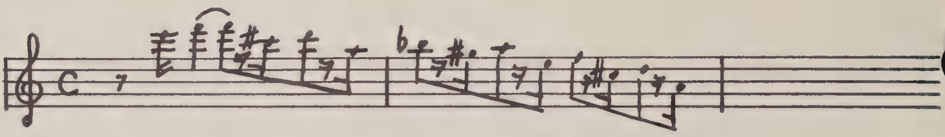

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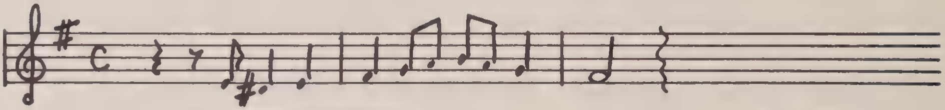

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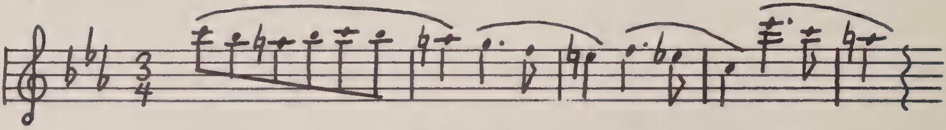
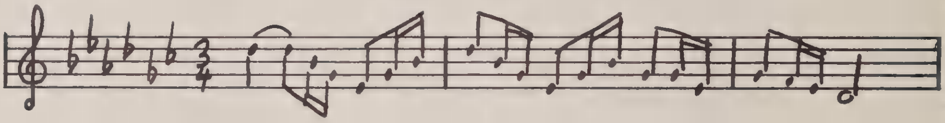
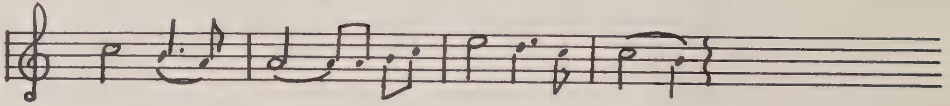


9.



10.



««« THE END »»»

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

MATHEMATICS OF INVESTMENT

2 HOURS

Approximate Percentage Values

Note. *You should obtain a copy of Mathematical Tables for Mathematics of Investment from the Presiding Officer.*

8 1. (*a*) Prove that the sum of the squares of the first n natural numbers is

$$\frac{n(n+1)(2n+1)}{6}.$$

4 (*b*) Find the value of $50^2+51^2+\ldots+99^2$.

11 2. Answer *either* (*a*) *or* (*b*).

either

(*a*) A man's total salary for ten years is $64,575. During the ten years he receives equal annual increments in salary. If his salary in his second year is $5,635, find,

(i) his salary for the tenth year,
(ii) the total number of years, at the same annual increment, he must work so that his total salary will be $152,650.

or

(*b*) The sum to infinity of a geometric series is $-2\frac{2}{3}$. If the second term is $\frac{3}{8}$, find the first three terms of the series.

3 3. (*a*) If $f(x)=x^3-x^2-\dfrac{1}{x^3}$, find, or explain why it is impossible to find, the numerical value of

(i) $f(0)$,
(ii) $f(-1)$,
(iii) $f(2)$.

CONTINUED OVER→

Approximate Percentage Values

4 (*b*) If $f(x)=\dfrac{x}{x+1}$, $g(x)=\dfrac{x+1}{x}$,
determine whether or not $-\dfrac{1}{x}f(x)=g\left(-\dfrac{1}{x}\right)$.

3 (*c*) If $f(x)=\sqrt{x-1}$, state,
(i) the values of x for which $f(x)$ is a real number,
(ii) the range of values of $f(x)$.

2 4. (*a*) State the binomial expansion of $(x+y)^n$ where n is a positive integer.

5 (*b*) Using four terms of a binomial expansion, find an approximate value of $(1.04)^5$.

5 5. (*a*) Prove ${}_nC_r + {}_nC_{r-1} = {}_{n+1}C_r$

6 (*b*) Find the total number of different arrangements of the letters of the word GAZETTE,
(i) if all letters are used,
(ii) if all letters are used but the two E's are adjacent,
(iii) if only six-letter words are formed.

5 6. The interest rate charged by a store is $1\frac{1}{2}\%$ per month. What are the nominal and effective interest rates?

10 7. A man borrows $5,000 on which he has to pay interest each year at the rate of 6% per annum. He also establishes a sinking fund at $4\frac{1}{2}\%$ per annum to repay the loan at the end of twelve years. (Interest is compounded annually in each case.)
(*a*) What total amount does the debt cost him each year?
(*b*) How much will be in the sinking fund at the end of six years?

5 8. (*a*) Prove $\dfrac{1}{s_{\overline{n|}i}} = \dfrac{1}{a_{\overline{n|}i}} - i$.

9 (*b*) A man is entitled to receive $2,500 each year for four years, followed by $1,500 each year for the next six years. If the interest rate is 5% per annum, compounded annually, find, without using tables, an *expression* for the value of these payments,
(i) three years before the first payment,
(ii) immediately after the fourth payment,
(iii) immediately after the tenth payment.

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ercentage
Values

8 9. A bank discounts a note at 6% per annum, compounded annually, and requires the full amount to be repaid in twelve equal monthly instalments, starting one month from now. The bank invests the money so obtained immediately at $\frac{1}{2}\%$ per month. What is the effective interest rate earned by the bank?

$$s_{\overline{12|}} \text{ at } \tfrac{1}{2}\% = 12.3355624$$

12 10. A 20-year, 7%, $100 bond, with annual coupons, is bought for $96. What average yield does the purchaser receive if he invests the yearly dividends immediately at $3\frac{1}{2}\%$ per annum, compounded annually?

««« THE END »»»

1867 1967

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

SECRETARIAL PRACTICE

2 HOURS

NOTE 1. *The Presiding Officer will place both Part I and Part II on your desk at 1:30 p.m. Part II, to which approximately 20% of the marks will be allotted, may be answered at any time between 1:30 and 2:30. (You are advised to allow no more than 20 minutes for Part II.)*

NOTE 2. *The last hour of the examination period will be for dictation and transcription (Question 3 of Part I).*

NOTE 3. *You may use either pen or pencil for your shorthand notes.*

PART I

Approximate Percentage Values

NOTE. *You are required to submit typed answers for Part I on the paper provided by the Presiding Officer.*

15 1. (*a*) From the rough notes given below organize in proper form and type the minutes of the executive meeting of the Ace Athletic Society held Thursday, May 18, 1967, at 8:00 p.m. in their clubrooms at 45 Main Street. Use proper procedure and suitable headings in setting up your typewritten material. No carbon copy is required.

The executive members present at the meeting were: E. Allen, Chairman; K. Matson, Treasurer; John Sims, Secretary; George Thom and Glen Ross, Advisers. The minutes of the last executive meeting held on April 15 were read and approved. Mr. Matson read his financial report which was approved. This report showed a bank balance of $322.50. Mr. Thom suggested, supported by Mr. Ross, that a sum of $500 be set aside as an athletic scholarship for the year 1967. Some discussion ensued and it was decided to bring this suggestion before the general meeting as a motion initiated by the above two members. Mr. Matson suggested, with support from Mr. Allen, that plans be drawn up for a "Millionaires' Night" to be held at the Plum Acres Curling Club in order to raise

CONTINUED OVER→

Approximate Percentage Values

funds for the scholarship proposal previously discussed. Some discussion developed and Mr. Allen agreed to formulate tentative plans for presentation at the general meeting when this suggestion would be brought forward as a motion. (The secretary was advised to draw up both of the above proposals as Notices of Motion for inclusion with the agenda for the next general meeting.) The date for the next executive meeting was set for June 15. The meeting adjourned for coffee and informal discussion at 10:00 p.m.

5 (*b*) On a separate sheet of paper, type out the two Notices of Motion mentioned in the rough notes above, as they would appear with the agenda of the general meeting. No carbon copy is required.

10 2. Set up the following information, attractively, for inclusion in a periodical such as the Canada Year Book. (No carbon copy is required.)

The Government of the Yukon Territory (as at April 30, 1964).

Commissioner: G. R. Cameron.

Members of the Council: Carmacks-Kluane, J. Livesey (Speaker); Dawson, G. O. Shaw; Mayo, R. L. McKamey; Watson Lake, D. Taylor; Whitehorse East, Herbert E. Boyd; Whitehorse North, K. McKinnon; Whitehorse West, J. Watt.

Officers of the Council: Territorial Secretary and Clerk of the Council, H. J. Taylor; Territorial Treasurer, K. McKenzie; Legal Adviser, C. P. Hughes.

50 3. At 2:30 p.m., the Presiding Officer will play the recording of three letters and one report.

(*a*) Write this material in shorthand.

(*b*) Type, with one carbon of each, the three letters and the report. (No envelopes are required.)

(*c*) Submit the shorthand notes stapled to the typewritten transcripts.

THE END OF PART I

SECRETARIAL PRACTICE

1967

PART II

(*20% of the total*)

NOTE 1. *You are advised to allow no more than 20 minutes for Part II.*

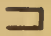
NOTE 2. *All items in Part II are equal in value.*

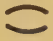
NOTE 3. *Only those answers which are indicated clearly in the answer column at the right will be marked.*

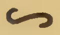
— — — —

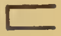
For each item below, four answers or completions are suggested. In each case select the correct answer or completion and circle its *letter* in the column at the right.

1. Which one of the following proofreader's symbols means "transpose"?

(A) 

(B) 

(C) 

(D) 

1. A B C D

2. Which one of the following names should be filed last?

(A) R. A. Browne
(B) Roy Browne
(C) R. A. Brown
(D) Roy Brown

2. A B C D

3. A sight draft drawn on May 10, 1967, to run for 15 days, is accepted on May 15, 1967. It is due on

(A) May 25
(B) May 28
(C) May 30
(D) June 2

3. A B C D

4. Which one of the following names should be filed last?

(A) 1965 Era Club
(B) 21 Club
(C) 1965 Club
(D) Twentieth Century Club

4. A B C D

5. Which one of the following is closest in meaning to List Price?

(A) catalogue price
(B) basic price less all charges, discounts, and trade allowances
(C) nominal price less a discount to buyers who have to sell again
(D) basic price plus duty and freight costs

5. A B C D

6. Which one of the following names should be filed last?

(A) C & P Roberts Co.
(B) C. P. Roberts & Co.
(C) C. P. Robertson
(D) C. P. Robertson Ltd.

6. A B C D

7. Which one of the following legal forms would you send to your client to obtain the legal right to vote his shares of stock at the Shareholders' Meeting?

(A) affidavit
(B) lease
(C) proxy
(D) warrant

7. A B C D

8. The word "codicil" refers to

(A) a coding system
(B) a manuscript of code words
(C) a legal modification to a will
(D) the use of a "mark" as a signature

8. A B C D

CONTINUED OVER→

9. The word "litigation" refers to
(A) an overseas government office
(B) a contest in law between opposing parties
(C) an agreement between two lawyers
(D) an Act of Parliament

9. A B C D

10. The phrase "power of attorney" refers to
(A) the power granted by one person to another to transact business legally and to sign documents for him
(B) the power granted to a lawyer upon receiving his degree
(C) the power granted by a judge to allow a lawyer to appeal a case
(D) the power granted to a lawyer upon receiving the title Queen's Counsel (Q. C.)

10. A B C D

11. The word "executor" refers to
(A) a member of the executive of a business firm
(B) a person appointed in a will to carry out the requests of the deceased
(C) a person appointed by the government to carry out a death sentence
(D) a person who dies intestate

11. A B C D

12. The person upon whom a draft is drawn in payment of a foreign trade debt is known as the
(A) drawer
(B) draftee
(C) payee
(D) drawee

12. A B C D

13. Which one of the following statements is *incorrect*?
(A) Footnotes are numbered consecutively with Roman numerals.
(B) A footnote is always placed at the end of a cited quotation.
(C) The footnote reference number is raised one-half space above the word it immediately follows.
(D) In the footnote, the reference number directly precedes the footnote, without an intervening space.

13. A B C D

14. Which one of the following abbreviations stands for "compare"?
(A) C.
(B) cf.
(C) c/o
(D) Co.

14. A B C D

15. According to the rules for the correct typing of figures, which one of the following is written *incorrectly*?
(A) It costs $10.
(B) Seventy-five dollars is the price.
(C) See page 916.
(D) My room costs $5 a week.

15. A B C D

16. Which one of the following is capitalized *incorrectly*?
(A) I went to that College one year.
(B) The children are in Algonquin Park.
(C) He lived in the Middle Ages.
(D) This is the Twentieth Century.

16. A B C D

17. Mrs. Robert Smith (née Jane Arthur) is an employee of Acme Limited. Which one of the following signatures would she use to sign documents for the firm? (She has legal authority to do so.)
(A) Mrs. Robert Smith
(B) Robert Smith (Mrs.)
(C) Jane Smith
(D) Jane Arthur

17. A B C D

. Which one of the following statements referring to Standard Time is *incorrect*?

(A) When it is 9:00 a.m. in Vancouver, B. C., it is 12:00 noon in Toronto, Ontario.

(B) When it is 3:00 p.m. in Toronto, Ontario, it is 4:00 p.m. in Halifax, Nova Scotia.

(C) When it is 9:00 p.m. in Calgary, Alberta, it is 10:00 p.m. in Ottawa, Ontario.

(D) When it is 10:00 a.m. in Winnipeg, Manitoba, it is 8:00 a.m. in Vancouver, B.C.

18.
A B C D

19. You sent the following telegram to A. Sand:
Black returned Monday, leaving Wednesday. Meet CPR train number 312, 8 a.m.
The chargeable word count of the telegram is

(A) 16
(B) 14
(C) 13
(D) 11

19.
A B C D

20. Which one of the following terms means "the same reference as that immediately preceding it"?

(A) ibid.
(B) loc cit.
(C) op cit.
(D) sic

20.
A B C D

«« THE END »»

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ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

ACCOUNTANCY PRACTICE

2 HOURS

NOTE 1. *Answer **SIX** of the questions on this paper, **TWO** from Section A and **FOUR** from Section B.*

NOTE 2. *You should obtain a supply of columnar paper from the Presiding Officer.*

Approximate Percentage Values

Section A

Answer any TWO questions in Section A.

10 1. Discuss the advantages and disadvantages of the partnership form of business organization as opposed to the sole proprietorship form.

2. (*a*) What is a statement of source and application of funds?

(*b*) List *four* types of sources of funds and *four* types of applications of funds.

3. State the purposes of *each* of

(*a*) year-end adjusting entries,
(*b*) closing entries,
(*c*) reversing entries.

Section B

Answer any FOUR questions in Section B.

4×20 4. Tom, Dick, and Harriet are partners having capital balances of $80,000, $60,000, and $40,000 respectively. The partnership agreement states that net income is to be distributed as follows.

Allowances for interest equal to 10% per annum based on capital balances.

Allowances for salaries: Tom, $6,000; Dick, $4,500; and Harriet, $1,000.

Remainder of net income to be divided in the ratio of: Tom, 1; Dick, 2; Harriet, 3.

REQUIRED:

Prepare a schedule showing the division of net income,
(*a*) assuming a net income of $35,000,
(*b*) assuming a net income of $15,000.

CONTINUED OVER

5. The following balances appear on the Balance Sheets of Cooper Collieries Ltd. for the account "Capital stock (including premiums and discounts)".

December 31, 1965	$210,000
December 31, 1966	$240,000

Additional information

4,000 common shares were outstanding on December 31, 1965. Of these, 3,000 had been issued at a 10% premium and 1,000 had been issued at a 10% discount.

Additional common shares were issued on August 1, 1966, at a 20% premium.

The following dividends were paid.

On June 30, 1966, $1.00 per share to shareholders of record as of June 15, 1966

On December 31, 1966, $2.00 per share to shareholders of record as of December 15, 1966

REQUIRED:

Calculate the total amount of dividends paid in 1966.

6. The Straka Company Ltd. is authorized to issue $100,000, 6-year, 6% bonds dated January 1, 1966, with interest coupons to be paid each June 30, and each December 31. On March 1, 1966, the bonds were sold with all coupons attached and the cash received was $97,500.

REQUIRED:

(*a*) Give the journal entry to record the sale of the bonds.

(*b*) Calculate the monthly charge to interest expense during the outstanding life of the bonds.

NOTE. *Calculations must be clearly shown.*

7. The Armstrong Stores Ltd. operates four branch stores and a warehouse. Each store, in addition to bearing its own expenses, must bear one fourth of the expenses of the warehouse. The total expenses of the warehouse are fixed at $100,000 annually, and do not vary with its use. The following is the departmental income statement of the business for the 1966 year.

	BRANCH				
	North	South	East	West	Total
Sales	$100,000	$ 85,000	$120,000	$140,000	$445,000
Cost of sales	45,000	50,000	110,000	60,000	265,000
Gross Margin	$ 55,000	$ 35,000	$ 10,000	$ 80,000	$180,000
Operating expenses*	40,000	45,000	40,000	45,000	170,000
Net income (loss)	$ 15,000	$(10,000)	$(30,000)	$ 35,000	$ 10,000

*Including $25,000 warehouse expenses for each store.

Mr. Armstrong is planning to close the South and East stores in order to increase net income.

REQUIRED:

(*a*) Using **ONLY** the given information, evaluate the soundness of Mr. Armstrong's plan. Show details of calculations.

(*b*) If Mr. Armstrong had received your assessment of his business at the end of 1965 and had followed your advice in 1966, prepare the income statement as it would appear for the year.

8. The following information summarizes the operations of the Groulx Manufacturing Co. Ltd. for its first month of operation.

Raw materials put in production	$ 80,000
Payroll (including indirect labour of $10,000)	60,000
Depreciation of plant equipment	8,000
Other manufacturing expenses	35,000
Burden applied to production	50,000
Over-absorbed (or under-absorbed) burden was closed to cost of goods sold	
Cost of goods completed	130,000
Cost of goods sold (at 50% markup)	70,000

REQUIRED:

The journal entries necessary to record the above information.

««« THE END »»»

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

GEOGRAPHY

2 HOURS

NOTE 1. *At 9.00 a.m. the Presiding Officer will give you the following.*

1. *An outline map of Canada to be used in your answer to Question 1*
2. *A topographic map of the Medicine Hat area to be used in your answer to Question 2*
3. *An air photograph of the Medicine Hat area to be used in your answer to Question 2*

NOTE 2. *The outline map of Canada and the topographic map of the Medicine Hat area are to be placed on top of your examination book(s) and inserted in the envelope.*

Approximate Percentage Values

Section A

Answer each question in Section A.

1. Use the outline map of Canada provided by the Presiding Officer in the answering of this question.

10 (*a*) Locate the following geographical features and boundaries. Print names and mark lines on the map.

Anticosti Island
Columbia River, in Canada
45th parallel as an international boundary line
Gulf of Mexico drainage, in Canada
"Height of Land" as provincial boundary lines (*two* examples)
Manitoba Escarpment
"Outer" edge of Canadian Shield (southern and western margins)
Peace River
St. Elias Range
Slave River

CONTINUED OVER

Approximate Percentage Values

7 (*b*) Draw on the map 100 mile by 100 mile squares to indicate *each* of the following. Label each square clearly.

the 10,000 square miles with the greatest population in Canada
the 10,000 square miles with the greatest iron ore production in Canada
the 10,000 square miles with the greatest potash production in Canada
the 10,000 square miles with the greatest nickel-copper production in Canada
the 10,000 square miles with the greatest asbestos production in Canada
the 10,000 square miles with the greatest petroleum production in Canada
the 10,000 square miles with the greatest tobacco leaf production in Canada

2. Refer to the topographic map, and the air photograph of the Medicine Hat area, and answer the following questions. Keep your answers brief.

Answer (a) and (b) on the topographic map.

1 (*a*) Draw a rectangle on the topographic map to indicate the area covered by the air photograph.

4 (*b*) Locate and name properly *four* important physiographic features on the topographic map.

Answer (c) to (k) in your examination book.

1 (*c*) Give evidence that the air photograph is more recent than the topographic map.

1 (*d*) Does the ditch in the south western part of the topographic map flow into or out of Seven Persons Creek? Give evidence for your answer.

3 (*e*) Give *three* indications that this area has a dry or semi-arid climate.

2 (*f*) Explain the occurrence of the forested areas.

3 (*g*) What kinds of farming are undertaken in this area? What evidence is there to support your answer?

2 (*h*) Describe briefly the street pattern of Medicine Hat. What factors determined the pattern?

1 (*i*) Estimate the area of the C.B.D. (central business district) of Medicine Hat.

2 (*j*) What were *two* main physical obstacles to highway and railway construction in this area? Give two examples to show how these obstacles were overcome.

3 (*k*) Make a sketch to show how the big bends of the South Saskatchewan River developed.

Approximate Percentage Values

Section B

Answer ONE question in Section B.

3. What is your understanding of the phrase "pollution of the environment"? Give examples of areas in Canada where pollution is a problem. Discuss the measures in pollution control which are being undertaken in one of the areas you have given as an example.

30 4. When there is competition for a limited water supply by different users, what criteria should be used in allocating the available water among them? In what parts of Canada is the allocation of water an important regional problem at present?

5. (*a*) Which, in your opinion, limits to a greater degree the extent of agricultural land in Canada, soil or climate? Give reasons for your choice and support your answer with regional examples.

(*b*) What reasons account for a change in the type of land use in *either* the Niagara Peninsula sub-region *or* in any other small region you have studied this year?

Section C

Answer ONE question in Section C.

6. Describe and explain the general characteristics of the distribution of population in Canada today. In the future will there be a greater geographical scattering of people or a greater concentration in well established areas? Give reasons for your answer.

30 7. The city of today is a nodal point for the functions of transportation and communication. In Montreal, Vancouver, Winnipeg, and Halifax, there are excellent examples of these functions. For *one* of these cities, describe and explain the importance of these functions today in relation to the regional economy and the national setting.

8. To what extent is the economic development of the Industrial Heartland of Canada related to the geography of the Near North? Discuss the interrelationships in terms of resources, transportation, and industries.

««« THE END »»»

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ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

GÉOGRAPHIE

2 HEURES

NOTE 1. *A 9 heures a.m. le surveillent vous remettra:*

1. *une carte géographique des contours du Canada pour votre réponse à la question 1*
2. *une carte topographique de la région de Medecine Hat pour votre réponse à la question 2*
3. *une photo aérienne de la région de Medecine Hat pour votre réponse à la question 2.*

NOTE 2. *Il faudra placer sur votre cahier (vos cahiers) des réponses la carte des contours du Canada et la carte topographique de la région de Medecine Hat et incérer le tout dans votre enveloppe.*

Valeur approximative en rcentage

Section A

Répondez à chaque question de la section A.

10 1. Pour répondre à cette question servez-vous de la carte des contours du Canada que vous a remise le surveillant.

(*a*) Indiquez les accidents géographiques suivants et leurs contours. Mentionnez les noms en lettres moulées et tracez les lignes sur la carte.

l'île Anticosti
la rivière Columbia, au Canada
la 45e parallèle comme limite internationale
le système d'écoulement des eaux du golfe du Mexique, au Canada
"hauteur des terres" comme limites provinciales (deux exemples)
l'Escarpement du Manitoba
la limite "extérieure" du Bouclier Canadien (contours sud et ouest)
la rivière à la Paix
le mont St-Elie
la rivière des Esclaves

—TOURNEZ→

Valeur approximative en pourcentage

7 (*b*) Tracez des carrés sur la carte, à raison de 100 milles de côté, pour indiquer chacun des cas suivants. Identifiez chaque carré clairement.

les 10,000 milles carrés où la population du Canada est la plus élevée
les 10,000 milles carrés où la production du fer au Canada est la plus grande
les 10,000 milles carrés où la production de la potasse au Canada est la plus grande
les 10,000 milles carrés où la production du nickel et du cuivre au Canada est la plus grande
les 10,000 milles carrés où la production de l'asbestos ou Canada est la plus grande
les 10,000 milles carrés où la production du pétrole au Canada est la plus grande
les 10,000 milles carrés où la production du tabac en feuilles an Canada est la plus grande

2. Vous reportant à la carte topographique et à la photo aérienne de la région de Medecine Hat, répondez aux questions suivantes. Ne donnez que de brèves réponses.

Répondez sur la carte topographique aux questions (*a*) *et* (*b*).

1 (*a*) Tracez un rectangle sur la carte topographique pour indiquer la région représentée par la photo aérienne.

4 (*b*) Sur la carte topographique, situez et nommez correctement *quatre* accidents physiographiques importants.

Répondez aux questions (*c*) *à* (*k*) *dans votre cahier des réponses.*

1 (*c*) Donnez la preuve que la photo aérienne est plus récente que la carte topographique.

1 (*d*) Le ravin, à la partie sud-ouest de la carte topographique se déverse-t-il dans le cours d'eau Seven Persons ou en sort-il? Prouvez votre réponse.

3 (*e*) Donnez *trois* preuves du climat sec ou mi-aride de cette région.

2 (*f*) Expliquez la croissance de régions boisées.

3 (*g*) Quels genres d'entreprises agricoles trouve-t-on dans cette région? Quellles preuves pouvez-vous apporter à votre réponse?

2 (*h*) Décrivez brièvement le plan des rues à Medecine Hat. Quels facteurs ont déterminé ce plan?

1 (*i*) Donnez votre appréciation de la région R.C.A. (région centrale des affaires) de Medecine Hat.

2 (*j*) Mentionnez *deux* des principaux obstacles physiques à la construction de la route et du chemin de fer dans cette région. Donnez deux exemples pour démontrer comment ces obstacles furent surmontés.

3 (*k*) Par une esquisse, montrez comment les grandes courbes de la rivière Saskatchewan du Sud se développèrent.

Valeur approximative en rcentage

Section B

Ne répondez qu'à UNE question de la section B.

3. Qu'est-ce que vous entendez par l'expression "région de pollution?" Donnez des exemples de régions au Canada où la pollution est un problème. Discutez de mesures de contrôle de pollution qui sont employées dans l'une des régions que vous avez donnée en exemple.

4. Quand il y a un problème de partage des eaux disponibles entre plusieurs groupes de personnes qui en ont besoin, quels guides peuvent aider à en faire le partage? Dans quelles parties
30 du Canada le partage des eaux est-il un important problème régional actuellement?

5. (*a*) D'après vous, qu'est-ce qui limite le plus l'étendue des terres arables au Canada, le sol ou le climat? Donnez des raisons pour justifier votre choix et citez des régions en exemples.

(*b*) Quelles raisons justifient un changement dans l'usage des terres, soit dans la région voisine de la péninsule du Niagara, soit dans une autre petite région que vous avez étudiée cette année?

Section C

Ne répondez qu'à UNE question de la section C.

6. Décrivez et expliquez les caractéristiques générales de la distribution de la population au Canada de nos jours. Dans l'avenir, trouvera-t-on une plus grande distribution géographique de la population ou une plus grande concentration dans des régions bien établies. Donnez des raisons pour justifier votre réponse.

7. De nos jours, une ville devient un point de jonction pour ce qui est des services de transport et de communication. A Montréal,
30 Vancouver, Winnipeg et Halifax, on a d'excellents exemples de ces services. Dans le cas de l'*une* de ces villes, décrivez ces services et expliquez-en l'importance de nos jours relativement à l'économie régionale et au plan national.

8. Dans quelle mesure le développement économique du centre industriel du Canada se rattache-t-il à la géographie de la région s'étendant vers le nord? Discutez des relations qui existent quant aux ressources, au transport et aux industries.

««« FIN »»»

1867 1967

ONTARIO DEPARTMENT OF EDUCATION

GRADE 13 DEPARTMENTAL EXAMINATIONS, 1967

ART

2 HOURS

NOTE 1. *At the beginning of the examination period the Presiding Officer will place on your desk two reproductions which will be used in answering Question 4.*

NOTE 2. *You are to answer only* **three** *questions,* **one** *from Section A,* **Question 4** *of Section B, and* **one** *from Section C. All of these questions are equal in value.*

NOTE 3. *The portfolio already submitted by the principal on your behalf is part of this examination.*

SECTION A

Answer ONE question from Section A.

1. Referring to specific artists and their works, discuss the North American "tradition of realism" in painting and trace its course through the nineteenth and twentieth centuries.

2. "Canadian architecture of the nineteenth century was influenced to a considerable degree by the *Gothic Revival* style." With reference to *specific* examples, comment on this statement under the following headings.

(*a*) the origins of the *Gothic Revival* style

(*b*) general characteristics of this style

(*c*) reasons for the acceptability of this style in Canada

(*d*) the use in Canada of particular variants of this style for architecture of different functions

CONTINUED OVER→

3. (*a*) Compare and contrast at least two paintings of historical events representative of *Neo-classicism* and *Romanticism*, employing at least one example for each movement. In your answer, consider the traditional meaning of 'history painting' and the different concepts of 'history' that one can find in the paintings you have chosen.

(*b*) In the two or more paintings selected, show how their particular styles reinforce the artists' interpretations of history.

SECTION B

All candidates will answer Question 4.

4. (*a*) Identify the artist and give the title and approximate date of *each* of the *two* reproductions which have been handed to you by the Presiding Officer.

(*b*) Identify the styles and point out the particular qualities of these styles which are found in the paintings.

(*c*) Compare and contrast the handling of composition and the treatment of the figures in the two paintings.

SECTION C

Answer ONE question from Section C.

5. "In the twentieth century the rejection of the traditional concept of the wall has permitted the evolution of a new architecture." Describe the means by which the architect has been able to reject traditional ideas concerning the wall, and discuss the advantages of the new wall systems he now employs. To illustrate your answer compare and contrast *two* of the following *pairs*.

Savoye House (Poissy) and Kaufmann House ("Falling Water," Bear Run)

Bauhaus (Dessau) and Guggenheim Museum (New York)

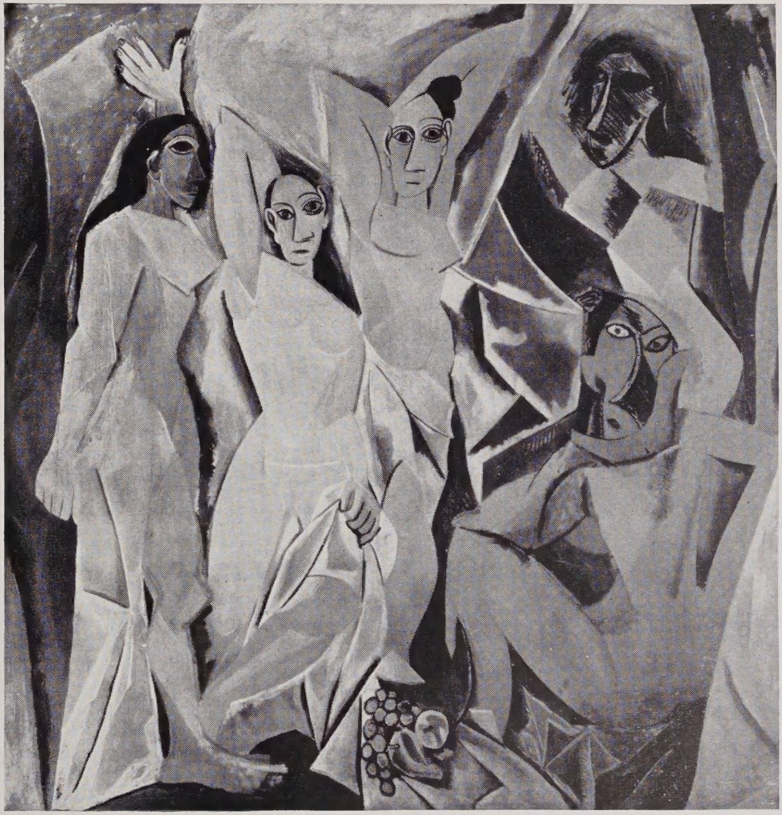
Lakeshore Drive Apartments (Chicago) and Unité d'Habitation (Marseilles)

6. Compare and contrast Cézanne and the Impressionists with respect to their attitudes towards nature. Specific artists and their works should be mentioned.

7. Describe and discuss any *four* of the following, selecting a work that illustrates each.

(*a*) Collage
(*b*) Group of Seven
(*c*) Expressionism
(*d*) Votive Painting
(*e*) Primitivism (Naïve Art)
(*f*) Social Criticism

««« THE END »»»



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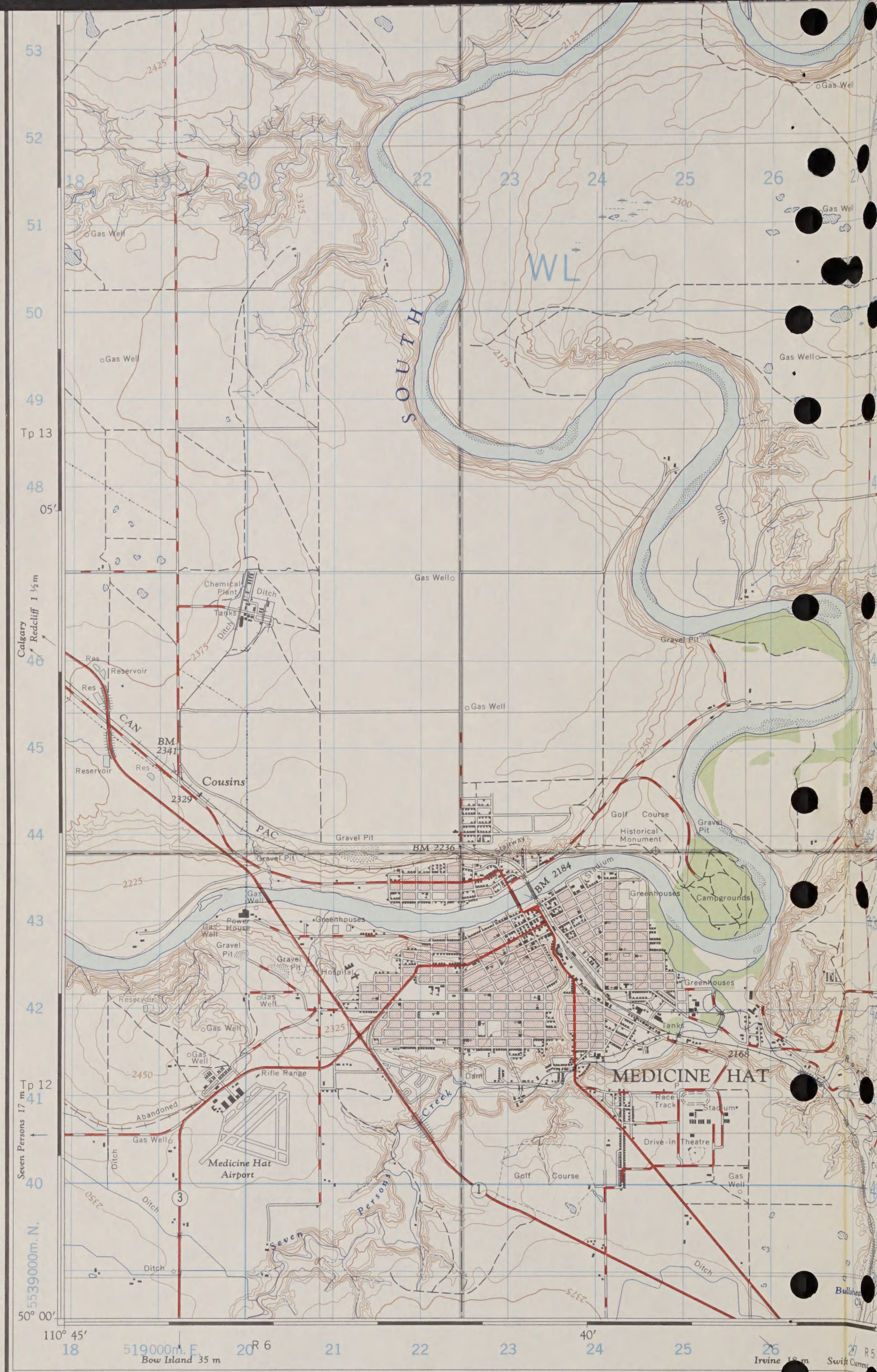

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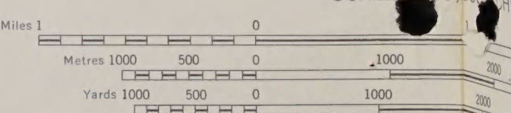
MEDIC[illegible]E

ALBERTA

WEST OF FOURTH MERI[illegible]N - OUES

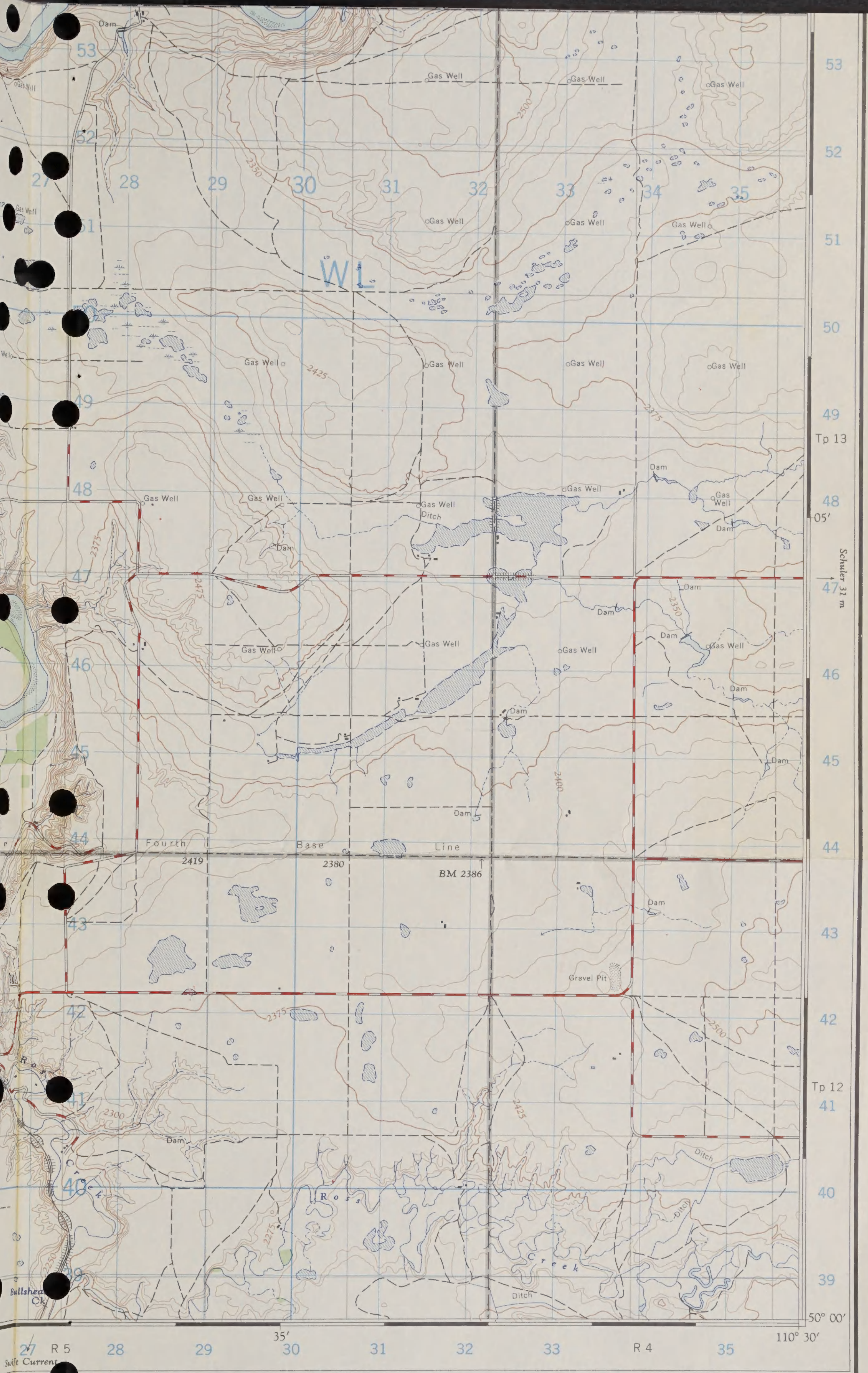
SCALE 1:50,000 ÉCH



CONTOUR INTERVAL 25 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1927
Transverse Mercator Projection

ÉQUIDISTA
Élévations en pieds
Réseau géodé

Roads:	Routes:	
hard surface, all weather	pavée, toute saison	more than 2 lanes / plus de 2 voies; 2 lanes / 2 voies
hard surface, all weather	pavée, toute saison	less than 2 lanes / moins de 2 voies
loose surface, all weather	de gravier, toute saison	2 lanes or more / 2 voies ou plus; less than 2 lanes / moins de 2 voies
loose surface, dry weather	de gravier, période sèche	
cart track	de terre	
trail or portage	sentier ou portage	
Railway, normal gauge, single track	Chemin de fer, voie unique (écartement normal)	siding / voie d'évitement; station / gare
Horizontal control point, with elevation	Point géodésique avec cote	454 △
Bench mark, with elevation	Repère de nivellement avec cote	BM 157→



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NE HAT

BERTA

OUES U QUATRIÈME MÉRIDIEN

50,000 ÉCHELLE

1 2 3 Milles

2000 3000 4000 Mètres

2000 3000 4000 Verges

ÉQUIDISTANCE DES COURBES: 25 PIEDS

évations en pieds au-dessus du niveau moyen de la mer

Réseau géodésique nord-américain unifié (1927)

ection transverse de Mercator

Building	Bâtiment	▪	Barn	Grange	▬
School	École	▪	Post Office	Bureau de poste	▪ P
Church	Église	▪	Cemetery	Cimetière	C

Mine or Open cut	Mine ou fosse à ciel ouvert	⚒
Lighthouse	Phare	☼
Power transmission line	Ligne de transport d'énergie	
River with bridge	Rivière avec pont	
Stream, intermittent or dry	Cours d'eau intermittent, ou à sec	
Lake intermittent; indefinite	Lac intermittent; rive imprécise	
Marsh or Swamp	Marais ou marécage	
Depression contours	Courbes de cuvette	